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Report of the PROCESS ACTION TEAM ON MILITARY SPECIFICATIONS AND STANDARDS

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The Deputy Under Secretary of Defense for Acquisition Reform, under the direction of the Deputy Secretary of Defense, chartered a Process Action Team on Military Specifications and Standards. The team was tasked to develop a comprehensive strategy to change the way that the Defense Department defines its requirements and specifies its needs in order to permit greater reliance on the commercial market and manufacturing base. The PAT developed twenty-four recommendations addressing all aspects of developing and applying Military Specifications and Standards; thirteen are considered to be principle recommendations. These recommendations are divided into chapters addressing: Performance Specifications, eliminating excessive contract requirements, overhauling the standards process, new management tools, the education imparative, institutional cultural change, and general acquisition reform. The recommendations in this report are the start point for reform of specifications and standards.

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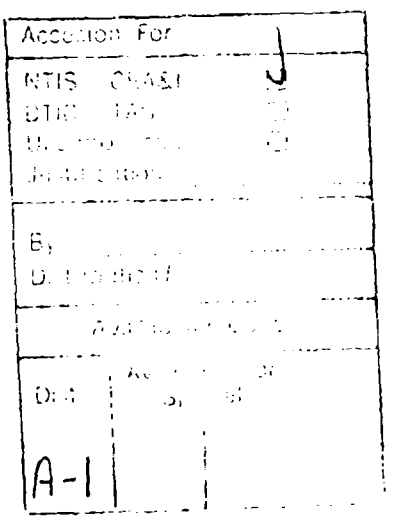

Process Action Team
Department of Defense
Military Specifications and Standards

BLUEPRINT FOR CHANGE

April 1994

IN MEMORY
OF

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The Process Action Team wishes to
acknowledge his contributions to this effort.

Table of Contents

Executive Summary

Blueprint for Change: Toward a National Production Base

Vision: A national defense force that derives strength and technical superiority from a unified commercial/military industrial base. An acquisition process that helps to unify the industrial base by applying the most modern industrial products, processes, practices, and standards of management and manufacturing.

Specifications and standards reform is an integral part of the acquisition reform vision, a vision intended to revolutionize the way the government does business. At the root of the problem are 31,000 military specifications and standards. Over the past 20 years or so, it has been an uphill, and not always successful, struggle to keep these up-to-date in a world of continuous and planned obsolescence. As DoD's budgetary and manpower resources are reduced, however, there is little hope that military specifications and standards can be kept either technically current or on track with commercial practices, products, and processes. The greater the divergence between the commercial and military sectors, the less the likelihood that military products and systems can be purchased from or produced in commercial operations.

DoD cannot afford to pay an increasing "defense-unique" premium for the goods and services it buys. It does not have the wherewithal to subsidize increasingly inefficient defense operations which do not have a self-sustaining market base. As these defense companies downsize, convert, or fail, DoD will lose a significant portion of the industrial base once capable of producing to its specialized requirements.

There are only two ways out of this dilemma. The first is to convert overly prescriptive military specifications and standards into nongovernment standards (NGS), commercial item descriptions (CIDs), and performance-based specifications and standards--- the kinds of documents that will allow suppliers to optimize production capacity and DoD to buy from a unified national production base. The second alternative is to face the prospect of an industrial base that is incapable of sustaining our forces in two major regional conflicts simultaneously.

Unfortunately, there are no universal solutions or overnight panaceas that will convert the military specifications and standards program into a "commercial friendly" system. It is an extremely complex system spanning acquisition needs ranging from nuclear weapons to chocolate chip cookies. There will probably never come a time when all defense needs can be satisfied by commercial operations. However the goal of the Process Action Team (PAT) on Military Specifications and Standards is to maximize the overlap between DoD needs and commercial capabilities. How DoD defines those needs is a critical determinant of the potential for overlap.

The PAT on Military Specifications and Standards developed 24 recommendations addressing all aspects of developing and applying military specifications and standards; 13 are considered to be principal recommendations. These recommendations are divided into chapters addressing: Performance Specifications, Eliminating Excessive Contract Requirements, Overhauling the Standards Process, New Management Tools, The Education Imperative, Instituting Cultural Change, and General Acquisition Reform. These chapters are highlighted below. "Action Agenda" sections are provided for principal recommendations. **Principal recommendations are highlighted in bold print throughout the report**. To facilitate execution of these recommendations, the PAT suggests that OSD implementing resources be temporarily assigned to DUSD(AR). Also, the Defense Standards Improvement Council should report to DUSD(AR) until the entire process is well underway.

Adopt Performance Specifications. The PAT recommends that performance-based specifications (within this report performance-based specifications refers to both specifications and standards) be used as the method of contracting for new systems, major modifications, technology generation changes, nondevelopmental items, and commercial items. New systems must be described in performance terms, letting the bidders propose the "how-to" details. Military requirements must be written in a way that encourages alternative solutions and reduces DoD oversight. Adoption of performance-based specifications will require up-front investment. Areas that warrant priority attention include engineering and design documentation, the degree of configuration control of the product baseline, and the military-unique manufacturing and management standards that drive up the cost of doing business.

Action Agenda

- **The Deputy Secretary of Defense should direct that all ACAT Programs for new systems, major modifications, technology generation changes, nondevelopmental items, and commercial items shall state needs in terms of performance specifications.**

  - Any deviation from this must be authorized by the Milestone Decision Authority (MDA).

  - Revise DoDI 5000.2 to state that, to the extent practical, the government should maintain configuration control of the functional and performance requirements only, giving contractors responsibility for the detailed design.

  - Place greater emphasis on the requirement to develop performance-based specifications.

  - Enhance training and disseminate the "Guide for the Preparation and Use of Performance Specifications."

- **The Deputy Secretary of Defense should direct that management and manufacturing standards be canceled or converted to performance or non-government standards.**

•• Issue policy stating that nongovernment standards and industry practices that meet the intent of military standards are the preferred alternative.

•• Develop plans to review military management and manufacturing standards that have been identified as the most significant barriers to commercial processes and are real cost drivers. Resulting action is to cancel, inactivate for new design, transfer to nongovernment standards, convert to performance-based specifications, or retain as military unique.

Eliminate Excessive Contract Requirements. Requirements find their way onto contracts in a variety of ways, mostly because of a business-as-usual approach. Because the whole objective is to change the way DoD does business, DoD solicitations and contracts must be stripped of non-value-added requirements. Every requirement must be justified.

The PAT's principal recommendations focus on two areas: incentivizing contractors to propose alternatives to military specifications and standards and prohibiting the use of military specifications and standards in solicitations and contracts.

Action Agenda

• **The Deputy Secretary of Defense should direct that all new high value solicitations and ongoing contracts will have a statement encouraging contractors to submit alternative solutions to military specifications and standards.**

•• Encourage contractors with multiple DoD contracts to notify contracting officers when changes to military specifications and standards force them to implement multiple systems in the same facility; and authorize contracting officers to consolidate multiple specifications and standards into single processes.

•• Government contracting officers shall expedite the processing of proposed alternatives to military specifications and standards and are encouraged to use the no-cost settlement method.

• **The Deputy Secretary of Defense should prohibit the use of military specifications and standards for all ACAT Programs except when authorized by the Service Acquisition Executive or designees.**

•• Exemptions granted for performance-based specifications, military unique specifications and standards, no acceptable alternative, or not cost effective.

Excessive Referencing: Excessive referencing in military specifications and standards results in additional cost and makes it difficult to identify actual user needs. Risk aversion, perceived policy requirements, a "that's the way it's always been" attitude, and a belief that more references are better, all contribute to the problem of unnecessary requirements. The

PAT recommends changing current referencing practices to ensure military specifications and standards only list references essential to establishing technical requirements.

Tiering of Specifications: Current Defense policy addresses the tiering of military specifications and standards. During Concept Exploration and Demonstration/Validation all military specifications and standards are provided for guidance only. During Engineering and Manufacturing Development only direct cited military specifications and standards and first-tier references are mandatory. During Production there is no mandatory cut-off. This policy is frequently violated during development and no cut-off during production is a costly practice. The PAT recommends a solution to this by restricting references in military specifications during all phases of acquisition.

Obsolete Specifications: The "Department of Defense Index of Specifications and Standards" and the "Acquisition Management System and Data Requirement Control List" contain outdated military specifications and standards and data requirements that should not be used for new development efforts. The PAT recommends a procedure for identifying and removing these obsolete requirements.

Overhaul the Standards Process. The military specifications and standards process itself is obsolete. It was not structured to deal with technology cycles that are measured in months rather than years or decades. Cooperation with industry has not been embedded in the system to ensure that future generations of standards will be technically current. Nor does the system give priority to adopting and implementing nongovernment standards. Unfortunately, this process will be more complicated than just switching mindsets or replacing military specifications and standards with NGSs. In many instances there are no NGS counterparts or at least no adequate counterparts. In some cases, the military standard is the industry standard. Much closer ties with industry and industry standard setting associations will have to be forged.

Action Agenda

- **The Deputy Secretary of Defense should encourage forming partnerships with industry associations to develop nongovernment standards for the replacement of military standards where practiced.**

  - Adopt and list in the DoDISS all nongovernment standards currently being used by DoD.

  - Implement Memoranda of Understanding between DoD and the nongovernment standards bodies to promote the use of nongovernment standards to the maximum extent possible.

  - Establish evaluation teams to review the federal supply classes and standardization areas to identify candidates for conversion or replacement.

•• Establish joint government-industry standards development projects. Promote resultant standards as national or international standards.

Specifications and Standards Development: Industry and government users are normally involved in the coordination of draft military specifications and standards; however, they are not typically included in the requirements determination process prior to the coordination process. The PAT recommends a process that will include industry and government users up front in the development and validation process.

Specifications and Standards Responsibility: Organizationally, there is a growing mismatch, particularly for commercial items, between the procuring activities and the specifications and standards preparing activities. To facilitate the conversion of military specifications and standards for commercial type items to procurement practices such as commercial item descriptions, the PAT recommends that specifications and standards preparing responsibility be assigned to the procuring organization.

Implementing New Management Tools. New acquisition strategies require new management tools and techniques to quantify real costs and savings, manage risk, reduce the need for oversight, and incorporate greater flexibility into the process. The PAT recommends a number of new management strategies to enhance not only specifications and standards reform but acquisition reform as well.

Reduce Oversight: Modern manufacturing systems rely on robust designs and process controls to ensure high quality and reliability. By contrast, DoD practice has been to impose military unique quality assurance standards and to require test and inspection of virtually every parameter (often viewed as an attempt to "inspect" quality into the product). The government could significantly reduce the resources devoted to quality control testing and inspection and improve quality by substituting process controls and nongovernment standards, such as the ISO 9000 quality series.

Action Agenda

• The Deputy Secretary of Defense should direct government oversight be reduced by substituting process control and nongovernment standards in place of development/production testing and inspection and military unique quality assurance systems.

•• Develop and implement changes to DoDI 5000.2 and the DFARS. Establish policy indicating that during production contractors are encouraged to use process control techniques and quality systems that comply with commercial standards such as ANSI Q90 or the ISO 9000 series.

•• Emphasize removing fixed allowable defect level measures from military specifications.

•• Emphasize greater use of process controls.

Adopt Modern Test and Inspection Techniques: The need to reform test and inspection procedures goes hand-in-glove with the reliance on performance-based specifications, industry partnering, and modern quality assurance techniques. Current development and production test and inspection requirements do not recognize fully the following techniques that have been proven in the defense and commercial sector: continuous evaluation, simulation, environment testing, dual-use test facilities, process controls, and continuous process improvement.

Action Agenda

- **The Deputy Secretary of Defense should direct a goal of reducing the cost of contractor-conducted development and production test and inspection by using simulation, environment testing, dual-use test facilities, process controls, metrics, and continuous process improvements.**

  - Buying commands and PEO/PMs retain a portion of the savings to incentivize and accomplish additional savings.

  - Maintain central library databases of existing high-value government test facilities and make these facilities available to all of DoD and industry for government contracts.

Mandate Corporate Information Management Systems for Acquisition: The ability to communicate electronically among industry suppliers and government users and to have electronic libraries of military standards, nongovernment standards, or commercial items is indispensable and is, perhaps, the only way to bring the system into the 21st century.

Action Agenda

- **The Deputy Secretary of Defense should assign Corporate Information Management (CIM) offices for specifications and standards preparation and use.**

  - The Acquisition Process CIM (APCIM) will serve as the functional proponent for automated specifications and standards development and automated acquisition aids.

  - The Acquisition Integration CIM (AICIM) will ensure proper integration of all CIM efforts within OUSD (A&T).

- **The Deputy Secretary of Defense should direct the use of automation to improve standards development, adoption, and applications. (Note: There are two recommendations addressing these issues.)**

  - Develop prioritized list of nongovernment standards to be digitized and incorporated into electronic standards libraries.

  - Provide searching, authoring, coordination, feedback, and networking tools to activities that prepare military specifications and standards.

•• Establish a database of nongovernment standards that are equivalent to military standards.

•• Provide automated expert systems incorporating acquisition reform rules to procuring activities.

Challenge Acquisition Requirements: The problem of unique military systems does not begin with the standards; it is rooted in the cost-performance trade-offs and dual-use analyses in the requirements development phase of the acquisition cycle. Although performance estimates for new systems are often quite accurate, other criteria such as cost and schedule are far less reliable by the time the system is ultimately fielded. However new technology tools, such as Distributed Interactive Simulation (DIS), can help reduce these uncertainties by analyzing alternative ways to design and build the system without ever leaving a computer. The virtual reality created by DIS can prioritize requirements by putting the system into simulated combat; it can assess the cost and performance impacts of substituting commercial components for military-unique ones; and it can identify potential manufacturing problems early in the requirements development process before there is any commitment to specific hardware design. The PAT recommends the use of DIS, Design to Cost, and Cooperative Research and Development Agreements to achieve aggressive cost/performance trade-offs and dual use capability.

Enhance Pollution Controls: Military specifications and standards are too often at odds with regional or national environmental pollution goals; they sometimes even require the use of known pollutants although alternatives are available. There is no clear DoD-wide strategy to address pollution prevention issues or to assign responsibility for eliminating toxic pollutants from military specifications and standards. The PAT recommends the establishment and execution of an aggressive program to eliminate or reduce and identify toxic pollutants procured or generated through the use of specifications and standards.

The Education Imperative and Instituting Cultural Change.

There are four fundamental requisites to specifications and standards reform, requisites that transcend the specifics of the implementation plan. These are **training, leadership, management**, and **funding.** Although there have been many attempts at military specification reform, none have successfully addressed all these critical components of change.

Training is the linchpin of cultural change, providing new skills and knowledge to implement a new acquisition paradigm. The acquisition work force must be trained in the tools and techniques of risk management in place of the risk avoidance approach that is today so deeply ingrained in the system.

Action Agenda

• The Deputy Secretary of Defense should direct revision of the training and education programs to incorporate specifications and standards reform. Contractor participation in this training effort shall be invited and encouraged.

•• Service acquisition personnel should develop "Defense Acquisition Reform Seminars," patterned on the Army "Road Shows," to train the acquisition workforce on the integration of new and existing policies and procedures resulting from acquisition reform initiatives.

•• Institute changes in career progression. Revise courses to incorporate elements of acquisition reform.

•• Expand traditional formal classroom training techniques.

Leadership entails both visibility and strategic planning. Leaders in the OSD must be visible vectors in this process of change. There is no substitute for committed and ongoing leadership. However acquisition reform demands a strategic plan, a vision of where we want to be and how we get there with concrete direction, milestones, and metrics. The OSD and Service and Agency officials charged with implementing the plan should be an integral part of the strategy formulation.

Action Agenda

• Senior DoD management must perform a major role in establishing the environment essential for acquisition reform culture change.

•• Direct implementation of the report "Blueprint for Change."

•• Demonstrate senior DoD leadership commitment to Acquisition Reform Initiatives through highly visible and carefully targeted participation in the implementation process.

•• Require and review an annual report tracking the progress of the specifications and standards reform initiatives. This report should include major milestones (which are detailed in the implementation plans of each recommendation), customer surveys, and targeted reductions in DoD oversight of contractors.

•• Incentivize Program Managers to select alternatives solutions to military specifications and standards.

Management implies authority, which is lacking in the specifications and standards arena. The individual nominally in charge of the system--the Standardization Executive--often has little control over the process and none over the funding allocations. Each local command makes critical decisions on military specifications and standards without the benefit of a DoD corporate or Service strategic plan.

Action Agenda

- **The Deputy Secretary of Defense should formalize the responsibility and authority of the Standards Improvement Executives, provide the authority and resources necessary to implement the standards improvement program within their Service/Agency, and assign a senior official with specifications and standards oversight and policy authority.**

  - Standards Improvement Executives to be appointed by the USD(A&T), Service Acquisition Executives, and Director DLA replacing the current Standardization Executives.

  - The Standards Improvement Executives will support those carrying out acquisition reform, direct implementation of the military specifications and standards reform program, submit and defend budgets, and participate on the Defense Standards Improvement Council.

Funding is the ultimate stumbling block to military specifications and standards reform initiatives. There is, in many specifications and standards offices, no lack of will to reform this system, but no money to do it. Budgets are being zeroed out across the Services, making specifications and standards maintenance, participation on NGS bodies, and adoption of performance-based specifications a virtual impossibility. It may not be feasible to fund this entire reform package at once. However the leadership must ensure that adequate funding levels are met in critical areas.

The PAT vision is to move towards an optimal mix of performance-based specifications, nongovernment standards, commercial item descriptions, and a carefully minimized set of unique military specifications and standards. There are several key elements in the agenda for change.

General Acquisition Reform.

Military specifications and standards are an integral part of the materiel acquisition process. The PAT focused on processes for both the development and use of military specifications and standards. Recommendations were then developed to enhance these processes. The four areas discussed below offer significant opportunity for improving materiel acquisitions; transcending specifications and standards. These are offered for consideration in the overall acquisition reform initiative.

Commercial Practices: Traditionally the DoD has used military specifications to purchase items that are almost identical to items purchased by consumers and industry. Military specifications were used to ensure quality, promote competition, and generally satisfy a host of procurement regulations and procedures. The military services and the Defense Logistics Agency have developed a number of innovative procedures that resemble commercial procurement practices for commercial like items. The PAT recommends greater interchange and use of these practices.

Partnering with Industry: Performance-based specifications and reduced oversight will require far better working relationships with industry than exist today. The effective use of partnering can improve the nature of "arms-length" transactions, avoiding unnecessary disputes, processes and delays while achieving the interests of the parties to the contract. The PAT recommends broad use of partnering concepts.

Activity-Based Costing: (ABC): Conventional cost accounting systems allow overhead costs to be pooled and spread across contracts, blurring the real cost of military requirements on individual product lines. An ABC accounting system, by contrast, generates a direct correlation between costs and activities/processes generated by specific requirements, allowing the program manager to identify and manage key cost-drivers in the acquisition process. The PAT recommends that contractors be encouraged to establish and use activity-based costing and activity-based management.

Integrated Product Development: (IPD): IPD is a natural adjunct to performance-based specifications, a risk management tool modeled on best commercial practice. It encourages a multidisciplinary approach to systems engineering, bringing all the functional areas together to address key issues in development, engineering, and production concurrently. The PAT recommends that IPD be the preferred risk mitigation tool for all developmental acquisitions.

The specifications and standards reform plan offered by the PAT for Specifications and Standards is far more comprehensive than can be outlined in an executive summary. The PAT's analyses, recommendations, action agendas, and impact and risk assessments are presented in the chapters that follow.

The specifications and standards reform agenda presented here is not without cost, time, attention, and other resources. In this era of fiscal austerity, it is difficult to propose reinvesting in defense. Nonetheless, specifications and standards is a major component of defense costs--perhaps as much as 15-20 percent of a $70 billion research, development and procurement budget. Clearly, this is a sufficiently large portion of the total investment to warrant managing it well.

It is equally clear, however, that the specifications and standards reform is only part of the picture. Without substantial and concomitant change in the contracting process the goal of achieving an efficient, unified national production base will remain an abstract hope.

Chapter One

Overview

Defense acquisition reform is no longer simply a desirable policy goal; it is a national imperative. DoD's declining procurement budgets can no longer sustain a defense-unique industrial base to supply its needs. Without fundamental acquisition reform, DoD will be unable to tap into the civilian manufacturing base to replace the capabilities lost as defense firms are downsized, converted, or eliminated. Without access to a broader national manufacturing and technology base, defense downsizing could jeopardize basic national security goals.

The challenge is to satisfy DoD needs using commercial R&D and manufacturing bases as much as possible and to eliminate barriers to that goal. Military specifications and standards are clearly barriers. The DoD Standardization Program was established by the Defense Cataloging and Standardization Act of 1952. Its purpose was to reduce the proliferation of items in the inventory, force national standardization by the Services, and ensure the quality of items procured by DoD.

The first two objectives have been well served by the program; the quality issue, however, has become problematic. Thirty years ago, military specifications and standards defined the state of the art. Today, they trail best commercial practices in many areas, increase the cost of defense procurement, and create a firewall between the commercial and military sectors.

Recognizing the urgency for fundamental change, the Deputy Under Secretary of Defense for Acquisition Reform, under the direction of the Deputy Secretary of Defense, chartered the Military Specifications and Standards Process Action Team (PAT). The PAT was tasked to develop a comprehensive strategy to change the way DoD defines its requirements and specifies its needs to permit greater reliance on the commercial market and manufacturing base.

The PAT was organized into six focus groups: systems acquisition, replenishment, training, management and manufacturing standards, improving specification and standard content, and automation. Each group, comprised of representatives from the Services, Defense Agencies, and OSD, developed recommendations pertinent to its area. Taken together, these recommendations chart the way to major cultural changes in the military specifications and standards process.

Background

There is no lack of studies about military specifications and standards. However, among the profusion of previous reform recommendations (most of which were never implemented), the solid rationale behind the principle of specifications and standards was lost.

All major buyers, even commercial ones, use specifications and standards to procure quality products. Standards are a vital component of international competitiveness; they contribute to higher quality at lower prices, increase product safety and reliability, and common production techniques. For the DoD standards process the use of commonly accepted specifications and standards across the Services is a logistical necessity. It ensures that DoD does not procure many different versions of an item which are not interchangeable and which require separate maintenance and support.

The fundamental problem is not that DoD specifies its needs, but rather that military specifications and standards are written and applied inappropriately and not tailored. Two problems generally arise: the technology described is obsolete or the amount of "how-to" direction prevents other ways of achieving the same result. Nevertheless, even well-written military specifications and standards can cause problems if they are improperly applied. Too often, unnecessary and non-value-added requirements find their way into DoD solicitations and contracts.

There are 31,000 military specifications and standards in the DoD Index of Specifications and Standards (DoDISS). Some of them describe unique military products and technologies--munitions, fuzing, submarines, nuclear weapons and related technologies--that have no commercial equivalents. Others, however, describe commercial products, such as computers or gloves, that are available off-the-shelf at far less cost; obsolete technologies; or management procedures and processes that cannot be satisfied by counterparts in the commercial sector. These military specifications and standards make it difficult for commercial firms to apply their expertise and capabilities to defense needs. They also prevent defense contractors from adopting new manufacturing techniques that reduce cost or enhance their commercial capability.

Strategy and Recommendations

The PAT identified six priority areas in which to focus the reform effort. Without action for change in these areas, the reform program cannot succeed. These include: Performance-Based Specifications, Eliminating Excessive Contract Requirements, Overhauling the Standards Process, Integrating New Management Tools, Increased Training and Education, and Leadership Commitment. Each area is described briefly below and in more depth in the chapters that follow. The chapters present a comprehensive set of 24 recommendations designed to achieve change in all areas of the military specifications and standards process. Within the report **13 principal recommendations are highlighted in bold print.**

Performance-Based Specifications

The most direct ways to ensure that military specifications and standards do not impede access to commercial products or processes are to adopt nongovernment standards (standards developed and used by industry) and shift to performance-based military specifications describing DoD needs in form, fit, and function terms. The PAT recommends that DoD adopt the policy that performance-based specifications be used for new developments, product improvements, and technology insertions.

Of particular concern are the military management and manufacturing standards, perhaps the ultimate in "how-to" as opposed to performance-based specifications. These are extremely disruptive to an integrated production base because they define an entire development or manufacturing operation which is unique to defense. The PAT recommends that special priority be given to canceling or converting these standards into nongovernment standards or performance-based specifications and to providing contractors with the flexibility to achieve single-process manufacturing operations.

The recommendations in this chapter can be implemented only with adequate resources, improved training, and ongoing cooperation with industry. Such profound cultural change must be accompanied by new skills and techniques to build confidence in the approach within the DoD acquisition community.

Eliminating Excessive Contract Requirements

The way military specifications and standards are applied is as important as their content. Requirements find their way into solicitations for a variety of reasons that have little to do with quality or price. In some cases, the addition of requirements is inadvertent. Every military specification and standard cites other references, which in turn cite still other references. The net effect is an unnecessary and expensive tiering of requirements. In some cases, specifications end up on contracts because the procuring activity simply copied a previous solicitation, including specifications or standards that may have been canceled, or superseded in the interim. In other cases, requirements are included to reduce risk. The system offers no rewards for innovation and risk-taking and no penalties for selecting an obsolete and more expensive approach. The PAT proposes to reverse these incentives by requiring justification for including military specifications and standards and data requirements in solicitations. An obvious corollary is to offer incentives to contractors and Project Managers to propose alternatives to military specifications and standards.

Overhauling the Standards Process

The supporting process, like many of the specifications and standards in the DoDISS, has ossified over time. The system is no longer flexible enough to keep pace with technology cycles that are measured in months rather than decades. Reforming the process, not just the specifications and standards themselves, will be critical in ensuring that future military specifications and standards retain technical currency and dual-use functions.

The PAT identified three key areas for reform: the need to work with industry to develop dual-use nongovernment standards; the need to create an electronic feedback system

to increase government-industry cooperation in the specifications and standards development, review and use process; and the need to consolidate specifications and standards preparation and procurement responsibilities into one entity, particularly for the purchase of common items through the Defense Logistics Agency.

Implementing New Management Tools

New ways of doing business require new management tools. The PAT recommends several innovative approaches that will improve the process. These new approaches include:

- Process Controls which substitute best commercial quality programs, such as ANSI Q90 or ISO 9000 series standards, for military-unique quality, test, and inspection standards. These NGS have already been adopted by DoD, but remain completely underutilized.

- Test and Inspection Procedures which embody best commercial practices including continuous evaluation, simulation, environmental testing, dual-use test facilities, process controls, and continuous process improvement.

- Acquisition Process Corporate Information Management (APCIM) Office to serve as functional proponent for implementing the required automation initiatives.

- Distributed Interactive Simulations (DIS) and other advanced techniques to create a computerized virtual reality in which cost-performance trade-offs can be made and commercial opportunities and manufacturing processes explored early in the requirements development process before any commitment is made to a specific hardware design.

- Pollution Controls which will establish a corporate strategy to minimize toxic pollutants in military specifications and standards.

Training and Education

Without increased training and education, no acquisition reform effort can succeed. The only way to create cultural change within a conservative system is to institute continuous and systemic training and education programs both for DoD personnel and contractors. The remedy for the automatic application, misapplication, or misinterpretation of uniquely military documents is an educated and informed document preparer and user. The objective of the education process should be the development of a versatile workforce with cross-functional and interdisciplinary backgrounds and orientations. The PAT recommends that senior acquisition personnel within the Services implement the new acquisition approach in their major commands which, in turn, will train their field activities--... :ain the trainer" strategy. It also recommends that training programs in key areas, includin_ NDI procurement, market research, activity-based costing and management, acquisition streamlining, integrated product development, performance-based specifications, incentive contracting, quality assurance, and specifications/standards application and development become a mandatory element in career progression.

Leadership Commitment

Clearly, there is an initial phase of changes in acquisition procedures that must flow from the top. The PAT concluded, however, that simply issuing new rules, directives, or regulations offers little prospect for success. The failure of past military specifications and standards reform initiatives has stemmed, for the most part, from leadership's failure to fund and participate personally in the process and to monitor implementation of the initiative.

Moreover, individuals within the acquisition community must be charged with implementing the military specifications and standards portion of the acquisition reform package. Currently, specifications and standards policy is set by OSD, the Standardization Executives, and the Departmental Standardization Offices. However, it is the major commands that provide the work force and resources to support military specifications and standards, resulting in a lack of linkage between policy and program implementation. Budget cuts have only exacerbated the problem by forcing the major commands to reallocate resources among competing priorities. The PAT recommends that a Standards Improvement Executive be appointed by each Service, empowered with the necessary resources and authority to implement the proposed changes and thereby maximize the use of commercial products and processes in the acquisition process.

General Acquisition Reform

Process improvement is a fundamental aspect of acquisition reform. The PAT identified the following areas where process improvement and process change offer significant opportunity for improving materiel acquisition.

Commercial Practices should be used for commercial like items currently being purchased with military specifications. The military services and DLA have developed a number of innovative procedures and best practices that should be shared among buying commands.

Partnering with industry which will embed cooperation into the system and obviate the need for many of the formal reporting requirements, data calls, and procedures that the current arms-length relationship necessitates.

Activity-based costing systems which generate a direct correlation between individual costs and specific requirements, rather than the current practice of simply "spreading" these costs indistinguishably across many diverse contracts. This technique allows program managers to identify key, and perhaps unnecessary, cost-drivers in the acquisition process.

Integrated Product Development (IPD) which encourages a multi-functional approach to system acquisition in order to address key issues in development, engineering, and production concurrently. IPD is a risk management tool modeled on best commercial practice.

Finally, two additional caveats should be noted. First, a comprehensive program of specifications and standards reform requires substantial up-front investment to achieve even greater downstream returns. Too often, it is simply assumed that these changes can be implemented without resources. The conventional wisdom seems to be that because military specifications and standards are bad, they can be easily and immediately converted into a

nongovernment standard or commercial item description. Nothing could be further from the truth. Many DoD needs cannot be satisfied with off-the-shelf items. There are not enough nongovernment standards in existence to substitute for military specifications and standards (and sometimes the NGS represents a lowest common denominator commercial alternative, or the item may be unique to the military). There will be no silver bullets or overnight solutions. Reforming the system will require dedicated human and financial resources. These up-front resource investment needs are estimated in each of the PAT's recommendations. Summary charts are found in Chapter Eleven Resources.

The second caveat is that even if all the recommendations in this report were adopted and implemented, the goal of a dual-use industrial base would not be guaranteed. Military specifications and standards are critical barriers to accessing a multipurpose manufacturing base, but they are not the only critical barriers. There is a plethora of acquisition laws, regulations and procedures, many of which are rooted in statute, that discourage commercial firms from entering the government market and impede defense contractors from competing in the commercial marketplace. Military specifications and standards reform can only be viewed as one part of a larger acquisition reform effort.

The recommendations in this report are the start point for reform of specifications and standards, not the end game. Continuous feedback, improvement, incorporation of new ideas and better processes are essential to the ultimate success of the effort. **This report should not become an inflexible requirement.**

Chapter Two

Introduction to Specifications and Standards

Specifications and standards are a complicated problem to understand, much less reform. One of the first barriers is the confusion caused by similar sounding terminology. For example, industry uses the term "standards" to describe both products and processes. In DoD parlance, "specifications" are generally used to describe products, material items, or components, while "standards" generally describe methods, processes, or procedures, i.e. ways of doing something. Performance-based specifications and standards describe what is needed. Process ("how-to") specifications and standards describe how to achieve it. In reality, though, all specifications and standards include some mixture of performance and "how-to" instructions.

Similarly, the difference between specifications and standards is fundamental to an understanding both of the problem and the recommendations offered in this report. Specifications and standards are used by every quality supplier in the world and by every major buyer seeking quality products. Specifications and standards are the unseen glue of modern civilization. They ensure that plugs from different appliances fit into the same electrical outlet and that light bulbs fit into standard fixtures. They ensure that the mustard you buy isn't just a yellow-colored substance, and that the vacuum cleaner doesn't give up a week after purchase.

The difference between DoD and other major buyers, however, is that military specifications and standards do not always stop at specifying what is required. Frequently, they also describe how to make a product, indeed, the one acceptable way to make it. Those detailed process descriptions often diverge from commercial practice. Where the standard describes processes like how to set up a quality assurance system, how the product must be tested and inspected, or how the work must be measured, DoD loses access not only to a commercial product, but to the whole commercial facility. Overly prescriptive process standards impede DoD access to commercial operations, which prevents it from acquiring defense unique items from flexible, multipurpose manufacturing operations. The dilemma for policy makers is that DoD's declining procurement budgets can no longer sustain a separate base of producers who have set up their operations to comply with these military-unique specifications and standards.

Standardization, on the other hand, is an entirely different process with a different rationale. One benefit of standardization is that it facilitates centralized purchasing. If every buying agent at every command bought their own supplies, they would pay retail prices and not volume discount prices. In order to buy centrally, there has to be some commonly accepted description of what needs to be bought. The exception to this rule is where there is no need for volume purchasing.

The primary reason to standardize, however, has more to do with the special problems of trying to field many advanced systems which have to perform under the stress of combat.

If an M-1 tank is disabled on a battlefield, the Army wants to ensure that there are not five different versions of the spare part needed to make it functional again. That would force the Army to identify which of the five alternatives is needed to repair that particular tank. Army technicians would have to be trained to work with all five versions of the part, and the Army would have to stock each of the five different spare parts to ensure that adequate supplies were available when needed (and that would depend on a crystal-ball calculation of which tanks are likely to be disabled). Clearly, lack of standardization creates a logistical nightmare, one that would only be multiplied if each Service were to stock different versions of the same component for each of their systems.

When the fundamental standardization concern is interoperability and interchangeability, a key question is whether the item is going to be repaired or replaced. When the damaged part can be thrown away, all that may be needed is a performance-based specification that defines the performance and interface requirements of the item. Under those conditions, it doesn't really matter how the product is designed and manufactured as long as it performs as required in the larger system. If the item must be repaired in service and possibly under battlefield conditions, the inner workings of every spare part might have to be identical to simplify the stockpiling, maintenance, and repair training demands. That implies a detailed, military-unique design specification and drawings.

In the end, the acquisition strategy must determine which parts will need to be repaired and which parts will be replaced when no longer functional. That, in turn, will determine what kind of specification will be needed and affects who can produce the item. A detailed design specification is more likely to exclude commercial solutions and producers. A performance-based specification will permit a wider spectrum of manufacturers to offer alternative design and manufacturing solutions.

Because of the uniqueness of military requirements, it is unlikely that DoD will ever be able to rely completely on performance-based specifications. But the PAT believes that there is far more opportunity to use them than has been exercised to date.

There are three ways to effect a shift to performance-based specifications:

1. Increase the use of simplified product descriptions called commercial item descriptions (CID). CIDs should describe an off-the-shelf item like computers or pajamas in performance terms. The only reason to standardize on these items is to be able to buy them in quantity and at discount prices without having each local command buy them separately. Properly written, the CID should not exclude any quality manufacturer from supplying the need.

2. Adopt nongovernment standards (NGS). In the private sector, companies band together to establish minimum performance requirements for their industry. Also, national standards setting bodies, like the American National Standards Institute, will set performance standards (e.g., quality and reliability) for industry as a whole. There are also internationally accepted standards, like the ISO 9000 series for quality manufacturing processes. Where industry, national, or international standards exist and meet DoD needs, they should be adopted and the military standard canceled. In some cases, the standard may not quite fit the bill and DoD representatives will have to

work with private standards-setting bodies to modify the existing standard. In others, a NGS for the needed product or process may not exist so that DoD representatives would have to work with the private sector to create one. Finally, in a few areas, the DoD standard is the de facto industry standard or there is no counterpart standards-setting body with which to work. That implies that DoD must create a performance-based military specification.

3. Use a performance-based military specification. Since performance-based specifications allow for a variety of design and manufacturing solutions, they permit more commercial firms to bid on the work. This, in fact, is highly cost-effective for the government. Because the commercial company has already made a substantial investment in R&D and manufacturing to service its commercial customers, the government is able to leverage an existing capability. It shares the cost of the R&D facilities and production lines with other customers, rather than paying the full cost of defense-unique development and production. Also, with performance-based specifications, innovation in the commercial sector is more quickly integrated into the DoD purchase. Despite the advantages of lower costs and more rapid technology upgrades, there are a few barriers to performance-based specifications. First, they are difficult to write and will probably require more expertise and knowledge. Second, the DoD culture rewards risk avoidance rather than risk management. With a complete design specification, those responsible for procurement believe the item will satisfy the need, even if it is not the best alternative or if it excludes commercial solutions. However their ability to guarantee that the item will satisfy the need is the primary criteria in their job performance evaluations. Finally, performance-based specifications may require more testing and evaluation of products to demonstrate that they meet requirements. These are offset by the use of modern materials and processes years after the design was completed.

The PAT believes that the optimal standardization solution is some combination of CIDs, NGS, performance-based specifications, and a carefully minimized set of military unique specifications. Substantial changes will be required across the procurement system to achieve that vision. The chapters that follow describe both the barriers and the PAT's action agenda to remove them. Each chapter provides a short overview of the problem, a summary of the recommendations and implementation plan, and a more detailed analysis of the risks and benefits and investment needs, along with a schedule of implementation and metrics required to track progress over time.

Chapter Three

Performance Specifications

One of the keys to commercial-military integration is to use performance-based specifications as much as possible in specifying DoD needs that cannot be met either through commercial item purchases or nongovernment standards. Unfortunately, not all of DoD's needs are satisfied either off-the-shelf or with existing NGS.

One way to bridge the gap and nurture a unified production base is to transition to performance-based descriptions for both system requirements and military specifications. New systems should be described only in form, fit, and function terms, leaving the production baseline and detailed configuration management controls to the contractor. Similarly, performance-based specifications should define only the form, fit, and function of the desired product (that is, the required size, weight, durability, etc.). By describing only the functional requirements, the government can give its contractors more flexibility to incorporate the latest technology and manufacturing methods in their proposals. Detailed drawings will be available and maintained in national standard formats by the contractor.

Military manufacturing and management standards, the diametrical opposites of performance-based specifications, pose a major stumbling block to greater contractor flexibility. The net effect of a "how-to" military specification is to limit access to a particular item or technology for which there may be a commercial equivalent. By contrast, the impact of "how-to" manufacturing and management standards is far more profound. They dictate how the work is to be performed, the production line configured, the work measured, and the quality control process implemented. Consequently, military manufacturing and management standards demand more than a defense unique product; they require that the whole operation be defense unique.

Management standards tend to be particularly hard to change because they have their own advocacy groups across the Services and within OSD. While these groups were created to provide expert advice in their own technical specialties, they are often lobbyists for the military standards they represent. They are empowered by DoD Instruction 5000.2, which lists 52 specifications and standards describing how these technical disciplines are to be incorporated in the acquisition process. This provides a mandate for the advocacy groups to resist anything less than full implementation of the codified wisdom embodied in their standards.

Although DoDI 5000.2 (Part 6, Para. 2.a.) does indicate that military standards should be tailored to program needs, the statement is buried in the text and offers little real counterweight to advocacy interests. The PAT recommends that all references to specifications, standards, and handbooks in DoDI 5000.2 be clarified with the statement that they are to be used for guidance only, and that these manufacturing and management standards be converted to performance-based specifications within two years. Because the development and application of performance-based specifications will require new skills, capabilities, and ways

of thinking, the PAT also recommends that some management latitude be incorporated in the transition in order to nurture confidence among the acquisition workforce.

Summary of Recommendations and Implementation Agenda

Recommendation: All ACAT Programs for new systems, major modifications, technology generation changes, nondevelopmental items, and commercial items shall state needs in terms of performance specifications.

- DepSecDef policy memorandum requiring the use of performance specifications in ACAT Programs. Any deviation from this must be authorized by the Milestone Decision Authority (MDA).

- Revise DoDI 5000.2 to state, to the extent practical, that the government should maintain configuration control of the functional and performance requirements only; giving contractors responsibility for control of the detailed design.

- Revise Military Standards 490, 961, and 962 to place greater emphasis on the requirement to develop performance-based specifications, and on contractor responsibility for quality.

- OSD should enhance training and (1) Disseminate the "Guide for the Preparation and Use of Performance Specifications" as a best practice. (2) Revise and conduct refresher training to make program managers and technical experts aware of the new acquisition tools. (3) Revise acquisition specific training under the career development program to emphasize use of performance specifications as the preferred alternative. (4) Revise career progression courses as necessary.

Recommendation: Direct that manufacturing and management standards be canceled or converted to performance or nongovernment standards.

- DepSecDef policy memorandum directing that contractors be given pre-award opportunity to propose and negotiate alternative contract specifications that "meet the intent of "cited specifications and standards."

- The DoDI 5000.2 should be revised such that all references to the management and manufacturing standards are revised so that the contractor is to "meet the intent" of the referenced standards and that nongovernment standards which meet the intent of the military standards are acceptable.

- Documents that industry has identified as being the most significant barriers to commercial processes must receive top review with the goal to: cancel or inactivate for new design, transfer to nongovernment standards, convert to performance-based, or retain as military-unique.

- Develop or revise program plans to remove impediments to commercial acquisition for critical management and manufacturing processes.

Performance Specifications

RECOMMENDATION: **All ACAT Programs for new systems, major modifications, technology generation changes, nondevelopmental items, and commercial items shall state needs in terms of performance specifications.**

DISCUSSION: The traditional DoD approach to developing military specifications and standards is to describe in exacting detail not only the end product but also the specific processes to be used to successfully deliver that product. This approach is an excellent means of satisfying user needs and achieving consistently high quality products at low risk to both the supplier and the procuring activity. Unfortunately, the approach also has significant shortcomings, characterized as follows, which more than offset any benefits:

- The specified processes often diverge from interested suppliers' usual industrial practices.
- The inflexibility to change stifles new ideas for process and producibility enhancement or insertion of new technology.
- The administrative burden, on the part of the government and contractor, to administer large volumes of contractual changes to the detailed requirement is costly.
- Integration of the industrial and DoD bases is difficult.
- Contractor incentives to offer better solutions are restricted.
- Acquisition of nondevelopment and commercial items is inhibited.

The proposed solutions will overcome these shortcomings in the following ways:

- Performance-based specifications, addressing only form, fit, and function, will leave design and process solutions to the contractor's ingenuity.
- Performance-based specifications will provide contractors greater flexibility in management, manufacturing, and design.
- Maintaining contractor control of the product baseline (government control at functional level only and at the discretion of the program manager) longer into the life cycle, possibly through use of integrated product development concepts, will overcome the paralyzing volume of change paper and ease the implementation of producibility and new technology insertions.
- Procurement of sustainment repair parts from the prime contractor throughout the life cycle, where appropriate, may accommodate more rapid insertion of new technology, assist in maintaining a production base, and offer improved turnaround times.

Performance-based specifications for defining design requirements and documenting design solutions is a goal. There will still be a need for military unique specifications that define an exact requirement and an exact design solution (e.g., naval nuclear propulsion as prescribed by P.L. 98-525 (42 USC 7158 Note)). The evolution should be toward a greater reliance on performance-based specifications. Program specific logistics and maintenance strategies must be thoroughly addressed in the acquisition strategy.

BARRIERS: The management of risk will require new techniques representing a very real cultural change. Program specific logistics and maintenance strategies must be thoroughly addressed in the acquisition strategy.

RISK: The risk in using performance-based specifications is limited principally to the ability of the procuring activity to assess with reasonable certainty whether a contractor's implementation processes and methods are consistent with the intended purpose or essentially similar to the guide requirements provided. This risk is considered minimal, or the creation and execution of a risk management plan can reduce the risk to minimal levels.

IMPACT:

PRO:

- Significant acquisition cost avoidance may result from this recommendation.

  •• Comparative analysis indicates a range of 20-25 percent in development of major systems and 10-15 percent in production/sustainment.

  •• 1991 DMSMS Report - The DASD (Logistics) indicates future microelectronics needs may cost $2.9B. As many as 40,000 microcircuit designs could be vulnerable in the next two to three years. Recent experience indicates commercial based / industry standards can save the government $500M over the next two years. All major weapon systems are affected.

- Ensures best mix of military and commercial specifications and standards.

- Emulates commercial buying practices.

- Provides greater opportunities for the acquisition of commercial and nondevelopmental items (NDI).

- Reduces product costs and enhances "best value" source selection.

- Virtually eliminates the administrative burden of contractual implementation of changes.

- Promotes timely insertion of new technology and producibility improvements.

- Avoids stovepipe review of product creation.

- Enhances competition by making DoD acquisitions more attractive to a wider industrial base.

- Reduces government oversight.

- Expands contractor flexibility in management, design, and manufacture with lower operating costs.

CON:

- Build-to-print industries will need to acquire greater engineering capability or team with systems houses.

- Build-to-print houses may perceive this as a limit to competition.

- Greater effort will be required to avoid proliferation of multiple-set repair parts in the inventory.

- Qualification test costs may increase as more suppliers are brought on-line by using performance specifications.

- Long-term relationships are normally required to maximize benefits received from using performance specifications.

- Evaluation of competing approaches becomes more complex in the source selection process.

- Could increase difficulty of supporting and maintaining systems.

IMPLEMENTATION PLAN:

Task 1: DepSecDef policy memorandum requiring the use of performance-based specifications in all ACAT Programs. Any deviation from this must be authorized by the Milestone Decision Authority. Approval of waivers for equipment already in the inventory is not required. (Draft Memorandum is attached.)

Responsibility: The Assistant Secretary of Defense (Production Resources) will be the primary office of responsibility to prepare and staff the memorandum.

Task 2: Acquisition Policy. Revise DoDI 5000.2 as follows:

- Add to para 2a(1) of Part 10 Section C, "Acquisition Streamlining":

  "The government should only maintain configuration control of the functional and performance requirements. The government can accept control of the allocated and product baselines subsequent to the functional configuration audit," if approved in the Acquisition Strategy Report.

- Add to para 3e of Part 9 Section A, "Configuration Management":

  "When product configuration control below the functional level is maintained by the contractor during the production/sustainment phases, requirements must be placed on the contract which define performance and design parameters that must not be changed to avoid adverse impact on logistics, operations, or competition.

- Delete para 3C of Part 6 Section R, "DoD Parts Control Program" and substitute:

  "3C Reprocurement: The parts control program will be applied to reprocurements of any repairable items which are defined by performance-based specifications. Multiple-set repair parts for performance-based specifications should be avoided if an adverse impact upon logistics is demonstrated. The parts control program will be considered for application to any other type item for which the acquiring DoD component anticipates life cycle cost savings."

Responsibility: Office of primary responsibility will be the System Program Manager.

Task 3: Military Specifications and Standards.

- Revise Military Standards 490, 961, and 962 to place a greater emphasis on the requirement to develop performance-based specifications. Highlight the benefits of performance-based specifications and reference available guidelines, e.g., AMC-P 715-17, "Guide for the Preparation and Use of Performance Specifications."

Responsibility: The office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary (Production Resources).

- Issue policy guidance and revise MIL-STD-490A, 4.4 Section 4, and MIL-STD-961C, 5.3.4 Section 4, to establish contractor responsibility for quality and compliance to performance specifications substantially as follows:

  > "Quality Assurance requirements delineated in performance-based specifications shall be the responsibility of the contractor, unless otherwise stated in the contract. The contractor shall certify to the government that the item or items offered for acceptance and delivery satisfy the requirements of the specifications through process controls and inspections. Process controls are the preferred method for contractor quality assurance. The government, at its discretion, may witness such contractor process controls or inspections and provide notification of such intent to the contractor."

Responsibility: The office of primary responsibility to issue policy guidance and staff the revisions is the DASD(PR) Standardization Program Division.

- Release and widely publicize the Army Materiel Command "Guide for the Preparation and Use of Performance Specifications" as a best-practice supplement.

Responsibility: Defense Standards Improvement Council.

Task 4: Training. (1) Revise and conduct refresher training to make program managers and technical experts aware of the new acquisition tools. (2) Revise acquisition-specific training under the career development program to emphasize use of performance-based specifications as the preferred alternative. (3) Revise career-progression courses as necessary.

Responsibility: The Deputy Assistant Secretary of Defense (Production Resources) will be the primary office of responsibility to initiate actions. Training tasks (2 and 3 above) will be the responsibility of the Defense Acquisition University.

RESOURCE REQUIREMENTS: Resource requirements are included in the Resources section of the Acquisition Reform Training Report and are not additive to the total resource requirement for these initiatives.

METRICS: Customer satisfaction, with the customer being industry at large, should be addressed by using a voluntary questionnaire on each solicitation of $5M and greater. The contractor will be requested to complete the questionnaire either by name or anonymously and send it to the cognizant service ombudsman office for incorporation into useable metric trends. The minimum content of this questionnaire will be:

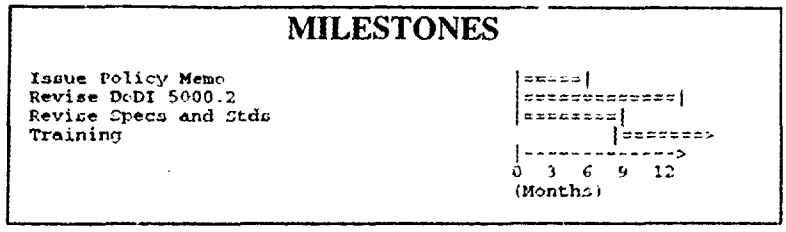
- Are there any military specifications or standards required as a part of this solicitation which could be better served by a commercial specification?
- Were any changes required in your routine manufacturing process specifically to accommodate this DoD purchase? Do you believe that the changes added value to the product?
- Did you offer alternatives to requirements of any military specifications or standards? Do you feel that your alternatives were given adequate consideration by the procuring agency? Were any adopted?
- How would you improve the solicitation to allow you, and other contractors, to quote a lower product cost while maintaining identical product performance?

Note: It could take up to a year to obtain OMB approval for using the questionnaire.

Buying commands will prepare trend analyses for review by the Defense Standards Improvement Council. Analyses will address customer satisfaction and engaging change proposals.

Number of Engineering Change Proposals by program phase: Dem/Val, Engineering and Manufacturing Development, Production start-up.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Under Secretary of Defense (Acquisition & Technology)
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force

SUBJECT: Performance-Based Specifications

1. Historically, we have used military unique specifications and standards to describe in detail not only end products but also specific manufacturing processes, materials, and testing to deliver successfully a product. This may ensure a quality product with low risk for the Government, but it may do so at a cost premium.

2. A viable solution is to use performance-based specifications when describing military products. This not only results in significant cost savings, but also provides greater opportunities for acquiring commercial and nondevelopmental items, promotes insertion of new technology, and reduces government oversight.

3. In this regard, performance-based specifications will be used when purchasing new systems, major modifications, technology generation changes, nondevelopmental, and commercial items. Because there will be cases when military specifications and standards that define an exact design solution are needed, the Milestone Decision Authority (MDA) is authorized to approve exemptions to this policy.

4. This policy applies to all ACAT Programs, defined in paragraph 3. Waivers for items already in the equipment inventory are not required. For ships with nuclear propulsion plants the Director, Naval Nuclear Propulsion will determine the specifications and standards to be used.

Signature Block

ATTACHMENT

Management and Manufacturing Standards

RECOMMENDATION: Direct that manufacturing and management standards be canceled or converted to performance or nongovernment standards.

DISCUSSION: The traditional approach to military acquisition is to contractually impose a set of military specifications and standards that define the specific tasks that must be performed. The main criticism of this set of standards is that they specify "how-to" rather than performance results. "Road Map For Milspec Reform-Integrating Commercial and Military Manufacturing"[1] recommends that:

> "The Deputy Secretary of Defense should order the conversion of all high-level manufacturing and management [standards] into performance-based specifications within two years from the date of the directive. Any manufacturing or management [standard which has] not been converted within that period should be made advisory only."

This issue has merit. However, evolving from traditional DoD practices to those practices aligned with the commercial sector requires significant cultural change.

The Army used nongovernment standards to the maximum in the development and acquisition of the Armored Gun System. To accomplish this, it first tailored each reference to a management or manufacturing standard and permitted commercial equivalents that met the intent. Referencing a particular military standard "or commercial equivalent" was typical. Second, in many instances the Army specifically required commercial standards. Third, the Army requested that the contractor's response to the Request for Proposal make maximum use of nongovernment standards. The total package for the Armored Gun System used 70 percent nonmilitary standards.

DoDI 5000.2 lists 52 standards which explain how various technical disciplines/requirements will be incorporated in the acquisition process. These standards reduce the ability of the program manager to tailor a process to meet his needs, inhibit innovation, and impede transition to commercial practices. Many of these standards have champions who will resist anything less than the full implementation of the standard. Maintaining these sections of DoDI 5000.2 strengthens the "stovepipes" and reduces the ability to transition management and manufacturing processes to commercial practices. To integrate the military and commercial industrial communities DoD must reduce to a minimum or eliminate these impediments.

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[1] "Road Map for MilSpec Reform - Integrating Commercial and Military Manufacturing," Report of the Working Group on Military Specifications and Standards, The Center for Strategic and International Studies, 1993.

It is noted that DoDI 5000.2, Part 6, Section Q, Para 2.a, states that:

"The military standards and handbooks listed in this Instruction define a set of recommended processes and criteria for achieving program requirements. Each program manager is responsible for understanding the intent of these documents and tailoring their application as appropriate to meet program needs."

This statement needs to be unburied and summarized with every reference to a military document.

In addition to the military standards listed in DoDI 5000.2, there are approximately an additional 1500 military standards listed in the Department of Defense Index of Standards. These standards should, as appropriate, be inactivated for new design, transferred to non-government standard bodies, be converted to performance-based specifications, or, as a last resort, retained as military-unique.

BARRIERS:

- DoDI 5000.2 requires revision and the process for revising this instruction is very cumbersome.
- DoD has fostered a culture of risk aversion. To change this culture, DoD leadership must encourage, protect, and reward those personnel who transition to process control management and the use of performance-based specifications.
- Program managers and acquisition personnel remain skeptical of the benefits of using commercial practices.
- The skill of the personnel reviewing acquisition documents must increase. Currently a technical specialist learns only the DoD-specified process and how to determine if the contractor is meeting the document requirement.
- Functional specialists are resistant to change.

IMPACT:

PRO

- Developing and implementing alternatives to the traditional practices in military management and manufacturing standards allows DoD to better use the commercial marketplace and manufacturing base.
- Accepting commercial management and manufacturing processes enables the integration of the commercial and military industrial bases.
- Using functional descriptions of management and manufacturing processes and implementing process control enables industry to develop processes tailored to their specific capabilities.

CON:

- Program managers will lose the ability to dictate detailed management and manufacturing processes.

- Rewriting management and manufacturing standards, specifications, and handbooks to maximize use of commercial practices will require resources from a shrinking resource pool.

- Defense contractors who have built their corporate culture around DoD management and manufacturing edicts will be faced with cultural change.

Response: Leaders in government and industry are leveraging with proof that high quality, more affordable systems and products can be designed and built under the new culture.

RISK:

- Transitioning to process control without proper training of government personnel could result in use of performance-based manufacturing and management processes which do not meet the needs of DoD.

- Training of the acquisition workforce will not receive proper emphasis and funding. Lack of training and education could result in costly acquisition errors.

IMPLEMENTATION PLAN:

Task 1: Guidance policy. DepSecDef issues a policy memorandum directing that contractors be given the option of complying with cited military standards or proposing relevant nongovernment standards or industry practices which "meet the intent" of cited specifications and standards. Negotiated requirements become contractually binding. This policy should be promulgated by the Acquisition Executives, through the Program Executives, to all Program Managers. (See Attachment 1.)

Task 2: DoDI 5000.2 Revision. The DoDI 5000.2 should be revised such that all references to the management and manufacturing standards are revised so that the contractor is to "meet the intent" of the referenced standards and that nongovernment standards which meet the intent of the military standards are acceptable. (Specific changes to DoDI 5000.2 are provided in Appendix H.)

Responsibility: The office of primary responsibility for Tasks 1 and 2 is the Deputy Assistant Secretary of Defense (Production Resources).

Schedule: DoDI 5000.2 should be revised within twelve months.

Task 3: Conversion of Standards. Attachment 2 provides examples of management and manufacturing standards that industry has identified as being the most significant barriers to

commercial processes, as well as the real cost drivers. These standards must be reviewed with the goal to: cancel or inactivate for new design, convert to nongovernment standards, convert to performance-based specifications or retain as military unique. This list should be reviewed and standardization projects initiated immediately for the most troublesome standards. Progress should be reviewed by the Defense Standards Improvement Council. The Army guide, "Functional Support Templates, Guide for Determining Functional Support Requirements for Acquisition Programs," will be provided as a best practice.

Responsibility: The office of primary responsibility for approving Attachment 2 and directing action is the Deputy Assistant Secretary of Defense (Production Resources). Directives will be sent through the Service Acquisition Executives to the Service/Agency Standards Improvements Offices.

Schedule: The goal for this task is 33 months. (Three months to finalize list, six months to revise Standardization Program Plans, and 24 additional months for action.) The Defense Standards Improvement Council will serve as the review/approval authority for final disposition on all specifications and standards.

Task 4: Standardization Program Plans. Lead Standardization Activities (LSAs) who are responsible for critical management and manufacturing processes will develop or revise their Standardization Program Plans to implement the recommendations within this report. The plans will be coordinated with all the Services and, where applicable, DLA. The Standardization Program Plans will be presented to the Defense Standards Improvement Council six months after receiving direction from USD(A&T). The Defense Standards Improvement Council will approve the plans and associated execution milestones after making additions or adjustments.

Responsibility: The office of primary responsibility to prepare the directive is the Deputy Assistant Secretary of Defense (Production Resources).

Schedule: Six months after receiving direction, the Service/Agency Standards Improvement Offices will present the Standardization Program Plans to the Defense Standards Improvement Council.

RESOURCES REQUIREMENTS: Management and manufacturing standards will either be converted to performance-based specifications or nongovernment standards. Two additional years will be required to complete NGS development where necessary.

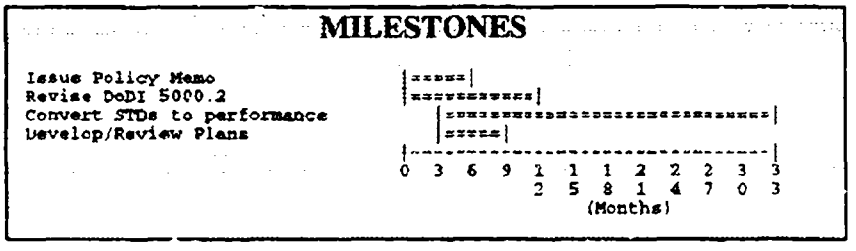
Year	1	2	3	4
$M	2.6M	7.7M	5.9M	0M

METRICS:

- Schedule for conversion of management and manufacturing standards to performance-based specifications or nongovernment standards will be tracked by the Standards Improvement Executives and summarized annually by the Service Acquisition Executives as part of the annual Standards Improvement Management Review.

- The Standards Improvement Executives will track the implementation of the critical management and manufacturing Standardization Program Plans and will report annually, as part of the annual Standards Improvement Management Review, to the DepSecDef on the status and resulting innovations.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director Defense Logistics Agency

SUBJECT: Application of Standards

1. Department of Defense Instruction 5000.2, Part 6, Section 1, Para 2.1, states that:

> "The military standards and handbooks listed in this Instruction define a set of recommended processes and criteria for achieving program requirements. Each program manager is responsible for understanding the intent of these documents and tailoring their application as appropriate to meet program needs."

2. I would like to emphasize that the use of management and manufacturing standards listed in this Instruction is not mandatory. They are tools available to the program manager and should be viewed as guidance documents. Nongovernment standards and industry practices that "meet the intent" of the military standard are the preferred alternatives.

3. I ask each of you to structure your acquisition programs to minimize the use of these military standards as contract requirements.

Signature Block

ATTACHMENT 1

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Managers
Director Defense Logistics Agency

SUBJECT: Management and Manufacturing Standards Requiring Priority Action

1. The military standards listed in enclosure 1 have been identified by industry as being the most significant barriers to commercial processes, as well as the major cost drivers in defense acquisitions. These standards represent, in part, the cost premium DoD pays relative to commercial processes and products. These standards must receive top review priority with the goal being (in priority order) to: cancel or inactivate for new design, transfer to n ngovernment standards, convert to performance-based specifications, or retain as military unique.

2. I would like you to initiate action immediately to review these standards and establish an aggressive schedule for appropriate disposition; the goal for completion is two years. Specific plans will be developed by the Service/Agency Standards Improvement Offices and progress tracked by the Defense Standards Improvement Council.

3. Related to the above review, I am also directing that Standardization Program Plans for the Standardization Areas identified in DoD 4120.3-M be revised or prepared. These Plans must implement the appropriate recommendations contained in, "Blueprint for Change, Report of the DoD Process Action Team on Standards." These plans will be reviewed by the Defense Standards Improvement Council within six months.

Signature Block

ATTACHMENT 2

DRAFT *

Management and Manufacturing Specifications and Standards

Requiring Priority Action

The following list was prepared using DoDI 5000.2; the list of key acquisition military specifications and standards in DoD 4120.3-M; two industry surveys conducted by the Army Materiel Command and the Office of the Secretary of Defense's Defense Management Review-Working Group Nine; and the American Defense Preparedness Association Report, "Doing Business With DoD, The Cost Premium" and their statements on Military Specifications and Standards before the House Armed Services Committee, Subcommittee on Investigations, July 22, 1992.

MIL-STD-490	Specifications Practices
MIL-STD-2000	Soldering Technology
MIL-STD-45743	Soldering
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-STD-275	Printed Wiring for Electrical Equipment
MIL-STD-454	Electronic Equipment Requirements
MIL-STD-461	Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference
MIL-STD-462	Measurement of Electromagnetic Interface Characteristics
MIL-STD-463	Definitions and Systems of Units, Electromagnetic Interference, and Electromagnetic Compatibility Technology
MIL-STD-883	Test Methods and Procedures for Microelectronics
MIL-STD-2165	Testability Program for Electronic System and Equipment
MIL-STD-5400	Electronic Equipment, Aerospace, General Specification

* The Deputy Assistant Secretary of Defense (Production Resources) will finalize this list.

ENCLOSURE 1

MIL-E-6051	System Electromagnetic Compatibility Requirements
MIL-P-28809	Circuit Card Assemblies, Rigid, Flexible and Rigid-Flex
MIL-M-38510	Microcircuits
MIL-P-46843	Printed Wiring Assemblies
MIL-P-55110	Printed Wiring Boards
MIL-STD-881	Work Breakdown Structure
MIL-STD-1567	Work Measurement
MIL-STD-337	Design to Cost
MIL-STD-470	Maintainability Program Requirements for Systems and Equipment
MIL-STD-471	Maintainability Demonstration
MIL-STD-499	Engineering Management
MIL-STD-781	Reliability Testing for Engineering Development, Qualification, and Production
MIL-STD-785	Reliability Program for Systems and Equipment Development and Production
MIL-STD-790	Reliability Assurance Program for Electronic Parts Specifications
MIL-STD-1543	Reliability Program Requirements for Space and Missiles Systems
MIL-STD-810	Environment Test Methods and Engineering Guidelines
MIL-STD-882	System Safety Program Requirements
MIL-STD-973	Configuration Management
MIL-STD-1388	Logistics Support Analysis
DOD-STD-1467	Software Support Environment
DOD-STD-2167	Defense System Software Development
DOD-STD-2168	Defense System Software Quality Program
MIL-STD-1472	Human Engineering Design Criteria for Military Systems, Equipment and Facilities

MIL-STD-1800	Human Engineering Performance Requirements for Systems
MIL-STD-1528	Manufacturing Management Program
DOD-STD-100	Engineering Drawing Practices
MIL-T-31000	Technical Data Package
MIL-STD-1521	Technical Reviews and Audits for Systems Equipment
MIL-STD-1250	Corrosion Prevention and Deterioration Control in Electronic Components
MIL-STD-1520	Corrective Action and Disposition System for Nonconforming Material
MIL-STD-1535	Supplier Quality Assurance Program Requirements
MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electronic Parts, Assemblies and Equipment
MIL-STD-2164	Environmental Stress Screening Process for Electronic Equipment
MIL-Q-9858	Quality Program Requirements
MIL-I-45208	Inspection System Requirements
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-45662	Calibrations System Requirements
MIL-STD-1310	Shipboard Bonding, Grounding, and Other Technology
MIL-STD-980	Foreign Object Damage Prevention in Aerospace Products
MIL-STD-1367	Packaging, Handling, Storage, and Transportation Program Requirements for Systems and Equipment
MIL-M-15071	Equipment and Systems Contexts Requirements for Manuals, Technical
MIL-M-38784	General Style and Format Requirements Manual, Technical
MIL-M-63036	Preparation of Operators Manual, Technical
MIL-M-63041	Depot Maintenance Work Requirements Manual, Technical
MIL-S-8879	Screw Threads, Controlled Radius Roots With Increased Minor Diameter

Chapter Four

Eliminating Excessive Contract Requirements

Although no one would argue that the military specifications and standards in the DoDISS are perfect, even well written standards cause problems when they are not properly tailored to the item being procured. Moreover, there are many other requirements that can be called out on contracts that add cost without value and unnecessarily differentiate commercial and military operations.

These requirements include not only military specifications and standards, but data item description (DIDs) as well. Many types of data item descriptions are fundamentally inconsistent with NGS or performance-based specifications. They require unique process-level and engineering data that is not required in commercial contracts (data which commercial contractors may regard as highly proprietary), impose significant DoD oversight on the contractor's processes, and add substantial cost to the process.

Unnecessary requirements--standards, specifications, and DIDs--find their way into DoD contracts in a variety of ways:

Established Practice: Too many standards, specifications, and DIDs end up on contracts because the preparing activity developing the requirements document will borrow from a previous requirements document on the assumption that what worked before will work again. Similarly, the procuring agency may simply copy the technical package from the last contract, inadvertently including inappropriate specifications or standards that have been canceled or superseded in the interim or DIDs that are not cost-effective or necessary.

Comfort Level: There are many requirements added to contracts because of the fear that eliminating them would bring accusations of mismanagement. One example is engineering drawings requirements. Sustaining activities often want detailed drawings down to the subcomponent level in case the product needs to be reprocured. But too many times, the drawings are never reviewed, let alone used, after they have been received. And, even if the product is reprocured several years later, the drawings may be technologically obsolete, requiring a form, fit, and function replacement. Not all reprocurement drawings are a bad investment, but they are a sufficiently large cost-driver to warrant some judgment in application.

Excessive Referencing: When properly applied, referencing of other specifications and standards can reduce length and complexity. Nevertheless, there are many references that are inappropriately or excessively cited in government specifications and standards (such as management, contractual, special packaging, and policy-related documents). Where commercial and military standards tend to differ is in the number and types of references. Commercial standards usually cite fewer than 10 other references while military specifications and standards typically cite 10-20 other references. It is not at all uncommon to see more than 20 references in military specifications and standards.

Tiering: Most military specifications and standards cite other references which in turn cite still other references, all of which creates an enormous tiering of requirements in the contract. While DoD has taken steps to limit potential tiering at the concept exploration/demonstration and engineering phases of development, there is no automatic cut-off point in the referencing chain during the production phase.

Improper Tailoring: Military specifications and standards provide guidance on a range of engineering matters depending on the item and the purpose for which it is procured. When the specification or standard is not properly tailored to a specific procurement (that is, the whole specification or standard is referenced instead of the portion required), some completely unnecessary or overly stringent requirements may be added, which drives up costs substantially and may make the item unnecessarily defense unique.

All of these problems are exacerbated by the failure to weed out obsolete specifications and standards from the DoDISS or redundant data item descriptions. The PAT recommends a separate section in the DoDISS for specifications and standards with the designation, "Inactive for New Design," clearly separating them from preferred design specifications and standards but permitting their use for sustainment of older systems or equipment. Additionally, the PAT recommends that the approved list of data item descriptions be reviewed to eliminate items that are unnecessary and to clearly identify DIDs that are inconsistent with a performance-based or NGS approach to specification.

Finally, the obvious corollary is to create even greater flexibility by offering incentives to contractors to propose alternatives to military specifications and standards. Such incentives will hasten the transition to performance-based specifications and promote the implementation of industry recommended management and manufacturing processes. The PAT recommends the use of innovative contract management that would encourage small and large businesses alike to introduce alternative solutions in the bid response process before contract award and incentivize contractors to submit alternatives to contract requirements after the award. This is designed to promote innovation through the use of more current commercial management and manufacturing procedures and to give contractors an opportunity to "standardize" on their facility configuration for management and manufacturing.

The PAT recommends action in five areas:

1. Offer incentives to contractors at every level to propose alternatives to military specifications and standards.

2. Prohibit the use of military specifications and standards.

3. Prohibit certain references in military specifications and standards documents.

4. Eliminate tiering at the production baseline.

5. Cancel or segregate unnecessary or obsolete standards, specifications and data item descriptions that are designated "Inactive for New Design."

Summary of Recommendations and Implementation Agenda

Recommendation: Direct that all new high value solicitations and ongoing contracts will have a statement encouraging contractors to submit alternative solutions to military specifications and standards.

- Revise the DFARs to require inclusion in all RFPs and RFQs and all supply contracts over $100,000 a notice encouraging contractors to propose nongovernment alternatives to military specifications and standards.

- Issue policy guidance to encourage contractors with current contracts priced at $500,000 or more to propose alternatives to military unique specifications and standards. The no-cost settlement method of FAR 48.104-3 will be the preferred settlement method.

- Issue policy guidance indicating that contractor efforts to offer nongovernment alternatives to military specifications and standards should be materially recognized in the determination of award fees and in the sharing arrangements negotiated.

Recommendation: Prohibit the use of truly military specifications and standards for all ACAT programs except when authorized by the Service Acquisition Executives or designees.

- Exemptions are granted for performance-based specifications, truly military-unique specifications and standards, no acceptable alternative, or not cost effective.

- Require that an order of preference for selection of specifications and standards (functionally equivalent to MIL-STD-970) be included in all prime contracts.

- Conduct training in the use of commercial alternatives to military specifications.

Recommendation: Change current processes and procedures to ensure that specifications and standards only list references essential to establishing technical requirements.

- Issue a policy memorandum that prohibits referencing of a proposed list of requirements including data item descriptions, packaging specifications, and management standards.

- Identify those specifications and standards that cite restricted references and require preparing activities to change them during the required five year review process.

Recommendation: Eliminate the current process of contractually imposing hidden requirements through references listed in equipment/product specifications or noted on engineering drawings.

- Amend DoDI 5000.2 to require that during production only the specifications specifically cited down to and including the equipment/product specification and their first tier references will be mandatory.

- Amend DOD-STD-100 and successor standards to incorporate the policy change.

- Develop and implement procedures that will ensure that the technical/procurement description (drawings, specifications, other technical documents) are thoroughly reviewed and updated to determine those requirements that need to be raised to the direct cite level.

Recommendation: Mandate cancellation or inactivation for new design obsolete specifications and standards that have had no procurement history for the past five years. Cancel all unnecessary data item descriptions.

- Fund the Air Force Cataloging and Standardization Center to identify military and federal specifications used by DLA that have not been used in procurement for the past four and five years. Provide the list to the applicable preparing activities to convert to CIDs or NGS, cancel, inactivate for new design, or justify retention.

- Separate the active military specifications and standards from the ones designated as "Inactive for New Design" in the DoDISS.

- Identify and eliminate all data item descriptions that are unnecessary, redundant, or not cost effective.

Innovative Contract Management

RECOMMENDATION: Direct that all new high value solicitations and ongoing contracts will have a statement encouraging contractors to submit alternative solutions to military specifications and standards.

DISCUSSION: Any movement to a new culture must include, in addition to committed leadership, incentives for those who will actually accomplish the change. New and unique approaches to accelerate the conversion process are essential and must provide clear benefits to both government and industry.

This can be achieved by encouraging industry to effectively introduce alternatives in the proposal response process as revisions or substitutes to specifications and standards cited in contract solicitations.

The Road Map for Milspec Reform (CSIS Report) recommends, "The Under Secretary of Defense for Acquisition should develop incentives for industry to prepare nongovernment standards that meet industry and government needs."

Incentives in the form of additional profit consideration, additional fee under an award fee contract, or the opportunity to receive, as a result of offering viable milspec alternatives, contract savings under the instant contract, will accelerate the implementation of the CSIS recommendation.

Contracting flexibility will result in reduced direct and indirect contract costs, increased government and commercial sales, increased contractor responsibility, and greater contractor authority and flexibility in manufacturing operations.

BARRIERS:

- Reluctance of government and contractor personnel to change corporate cultures and procedures (with the associated implementation expenses and initial risks) to convert to a performance-based specification approach. This can be overcome by training and providing incentives to facilitate the change.

IMPACT: Adoption of the implementation strategy should provide immediate and long-term benefits to both government and industry.

PRO:

- Industry claims the use of military specifications and standards in government contracts forces them to incur unnecessary additional costs which are subsequently passed on in contract prices to the government. Providing contractors with the opportunity and an incentive to offer alternatives should, therefore, result in reduced

contractor costs, lower future contract prices, increased acquisition of commercial items, and reduced government oversight.

- This approach will encourage contractors to update specifications and standards in existing contracts to the latest version to assure commonality in operations. Future contracts should contain clauses to facilitate such updates.

CON:

- Some industries have based their corporate procedures on current military specifications and standards. Changing DoD's approach may force them to realign their corporate procedures.

RISKS:

- Contractors may intentionally propose a more costly specification and after contract award offer a less costly specification alternative in order to retain instant contract savings.

- Government acceptance of a specification or standard alternative could result in contractor cost savings under the instant contract without cost savings to the government.

- Some aspects of developing profit involve subjective judgments. It is possible contracting officers could go beyond the bounds of reasonableness and negotiate excessive profit percentages.

IMPLEMENTATION PLAN:

Task 1: Initiate action to revise the Defense Federal Acquisition Regulation Supplement (DFARS) to reflect substantially the following:

- The following provision shall be inserted in all requests for proposals (RFPs) and request for quotations (RFQs) which cite military specifications or standards when the contract amount is expected to be $100,000 or more.

NOTICE TO OFFERORS - Alternatives to Military Specifications and Standards

The Department of Defense is committed to minimizing the incorporation of military specifications and standards and outdated federal and commercial documents in contracts, and is seeking to use alternative, tailored, or updated nongovernment specifications and standards to the maximum extent practicable to satisfy its requirements. Offerors are encouraged to identify and propose alternatives to those military, federal or commercial specifications and standards which are incorporated in this solicitation. Such alternatives will be considered by the government during the source selection.

- The following clause shall be inserted in all new supply contracts which cite military specifications and standards when the contract is expected to be $100,000 or more:

> Updating Specifications and Standards
>
> If the contractor has a contract, or multiple DoD contracts, that incorporate outdated or different versions of military specifications or standards, the contractor may request that all of its contracts be updated to the latest version of the applicable specifications or standards. Updating must not affect the form, fit, or function of any deliverable item, or increase the cost to the government. The contractor may submit updating requests through the administrative contracting officer to the responsible contracting officers and shall perform the contract in accordance with the existing specifications and standards until notified by the administrative contracting officer that updating is approved.

Responsibility: The office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

Task 2: Issue policy guidance providing substantially the following:

Existing contracts: Contractors that have current contracts priced at $500,000 or more and a substantial contract effort remaining to be performed shall be encouraged to propose alternatives to those military unique specifications and standards listed in the Department of Defense Index of Specifications and Standards (DoDISS) when the contractor feels the contractually required specification or standard:

- Impedes the use of modern engineering, manufacturing, or management processes.
- Is not cost effective.

To encourage contractor efforts and minimize administrative burdens, contracting officers shall expedite the processing of proposed alternatives to the maximum extent possible, and are encouraged to use the no-cost settlement method of FAR 48.104-3 when appropriate. Contracting officers may also negotiate no-cost settlements when they determine that cost savings to the contractor are offset by the government costs of implementation.

In addition, it is recognized that contractors often have multiple DoD contracts in the same facility. These contracts may cite the same basic specifications and standards but may reflect different change numbers to the specifications and standards, depending on the time the individual contract was issued. This condition often causes the contractor to manage multiple systems for the same general functional area or responsibility. Contractors are encouraged to notify the respective program managers and administrative contracting officers where such a condition exists and where contract modifications to upgrade the

specifications and standards to current configuration are considered appropriate and cost-effective.

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

Task 3: Issue acquisition policy guidance allowing for the consideration of additional profit or fees to contractors offering alternatives to military specifications and standards.

- Add to DFAR 215.971-2(f)(ii), after "... spare parts pricing reform, value engineering", the following: "offering of viable military specification alternative);".

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

Task 4: Expand the incentive contracting block in acquisition training programs.

Responsibility: Service and DAU acquisition course managers.

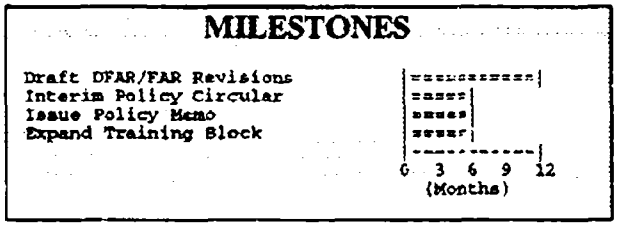
RESOURCE REQUIREMENTS: Resource requirements for training are included in the section on Acquisition Reform Training and Education. No additional resources are requested for implementing this recommendation although it is recognized additional workload is required. This workload should be absorbed by the current workforce since additional work will be incremental and distributed over time.

METRICS:

- Number of contractors offering alternatives to military specifications and standards per 100 proposals.
- Percentage of solicitations resulting in incentive contracts where alternatives to military specifications and standards are offered.
- The Service Standards Improvement Executive will monitor these metrics and report them to the SAE on a quarterly basis.

(Note: The current form DD 350 could be modified to provide source data.)

SCHEDULE: Milestone schedule is as indicated.



Prohibit Use of Military Specifications and Standards

RECOMMENDATION: **Prohibit the use of military specifications and standards for all ACAT programs except when authorized by the Service Acquisition Executives or designees.**

DISCUSSION: In 1993, the Center for Strategic and International Studies (CSIS) Working Group on Military Specifications and Standards completed a year long study of the "military specification" process.

In the foreword of its report, *ROAD MAP FOR MILSPEC REFORM*: Integrating Commercial and Military Manufacturing[2], the CSIS working group related that the "milspec" issue has been investigated so often that most of its "recommendations have been proposed or considered at one time or another by blue ribbon commissions, Defense Science Boards, or process action teams."

The report concluded that reform is needed to "make it harder to apply uniquely military specifications and standards in DoD contracts" and suggested DoD purchasing officers and program managers be required to justify the application of a military specification or standard in a contract.

BARRIERS: Cultural changes will be required.

- The DoD work force requires re-training to accommodate this cultural change.
- The DoD procurement process is conservative and tends to over specify its requirements.
- DoD prefers complete compliance with all of its requirements.
- Substitute commercial standards are often not available.
- Military standards can represent "rice bowls" for those who develop, maintain and use these documents in both government and industry.

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[2] "Road Map for MilSpec Reform - Integrating Commercial and Military Manufacturing," Report of the Working Group on Military Specifications and Standards, The Center for Strategic and International Studies, 1993.

IMPACT:

PRO:

- Increased use of nongovernment specifications and standards can lead to a multipurpose production base, one that allows military and commercial items to be researched, developed, engineered, and produced at a single operation.

- Increased use of nongovernment specifications and standards should allow DoD to make greater use of components, systems, and services available off-the shelf. This should increase competition and lower costs.

- Technology insertion should occur at a faster pace.

- Development and maintenance costs of military specifications and standards should decrease.

- Decreased use of military specifications and standards can facilitate transition from oversight to teaming.

CON:

- The increased use of commercial products could affect the potential cost of operability, supportability, and maintainability through the proliferation of parts.

  Training will be required to insure logistics support is not degraded.

- Additional funding will be required for DoD activities to participate in the development and maintenance of nongovernment standards.

RISK: An assertive implementation approach is needed across all DoD components. Partial implementation could result in mixed direction to industry. Users of military specifications and standards rely on the preparing activity to incorporate current policies and procedures. Failure of any organization to change current practices could impact other procuring organizations.

IMPLEMENTATION PLAN:

Task 1:

- DepSecDef issue policy memorandum prohibiting the use of military specifications and standards in all ACAT Programs except where authorized by the Service Acquisition Executive or designees.

  - Exemption may only be granted for performance-based specifications, truly military-unique specifications and standards, no acceptable alternative, or not cost-effective.

- Require that an order of preference for selection of specifications and standards (functionally equivalent to MIL-STD-970 and OMB Circular No. A-119) be included in all prime contracts. Draft memo is attached.

Responsibility: Office of primary responsibility to prepare and staff this change is Deputy Assistant Secretary (Production Resources).

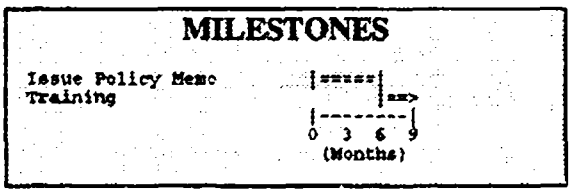
Task 2: Training. Conduct training as part of the Road Shows in the use of commercial alternatives to military specifications.

Responsibility: Service Acquisition Executives.

RESOURCE REQUIREMENTS: The workload associated with implementing this recommendation can be absorbed by the current workforce by reprioritizing and reallocating personnel.

METRICS: Program managers should track use of military unique specifications and standards and report out at milestone/program reviews.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director Defense Logistics Agency

SUBJECT: Use of Military Specifications and Standards

1. To facilitate the transition from the use of military specification and standards, to stating requirements in a manner that fosters greater application of commercial processes and procedures, the following policies are provided for all Acquisition Category (ACAT) I, II, III and IV programs.

2. The use of military specifications and standards are prohibited in all ACAT programs. Exemptions to this policy may be granted by the Service Acquisition Executive or designees for: performance-based specifications, truly military-unique specifications and standards, no acceptable alternative is available, or not cost effective. For ships with nuclear propulsion plants, the Director, Naval Nuclear Propulsion, will determine the specifications and standards to be used.

3. An order of preference for selection of specifications and standards will be included in every contract in accordance with OMB Circular No. A-119.

4. This policy is effective 180 days from the date of this memorandum.

Signature Block

ATTACHMENT

Excessive Referencing

RECOMMENDATION: Change current processes and procedures to ensure that specifications and standards only list references essential to establishing technical requirements.

DISCUSSION: Excessive referencing of other specifications and standards and their associated requirements results in additional costs and makes it difficult to identify actual user needs. Risk aversion, perceived policy requirements, ignorance, a "that's the way it's always been" attitude, poor researching, and a belief that more requirements are better, contribute to the problem of excessive referencing and unnecessary requirements.

Properly applied, referencing is a valuable tool that is widely used in both commercial and government documents. Referencing can help ensure automatic updating of requirements when the referenced documents are changed, and reduce the length and complexity of documents. For those documents widely used and recognized in industry, the reference has more meaning than lengthy prose.

Commercial and government specifications and standards tend to differ in the number and types of references. For example, commercial documents for materials, piece parts, and components typically cite 10 or fewer references, whereas military specifications and standards typically cite between 10 to 20 references, and it is not uncommon to see more than 20 references. Management, contractual, special packaging, data, and policy-related documents are examples of different types of references inappropriately or excessively cited in government specifications and standards. While current policies discourage these types of references, they do not specifically prohibit them.

Training will be a key factor to ensuring the proper streamlining of requirements using specifications and standards. There are several steps that can be taken immediately such as prohibiting the inclusion of certain types of requirements, using existing automated tools to track the removal of these unnecessary requirements, including language in the contract to free the contractor from having to comply with unnecessary or inappropriate requirements, and encouraging specifications and standards developers to use alternative approaches in verification of requirements.

BARRIERS: Risk aversion will be the most significant barrier. The lack of resources for training and for removing unnecessary or excessive requirements from thousands of specifications and standards will be a major barrier.

IMPACT:

PRO: The impact will be reduced costs, shortened procurement times, improved credibility with industry, and a clearer understanding by the government and contractors of the true specification requirements.

CON: None.

RISK: The DoD may acquire items that fail to meet the users' requirements. To minimize this occurrence, work closely with the users to ensure that their requirements are met.

IMPLEMENTATION PLAN:

Task 1: DepSecDef issue a policy memorandum that prohibits citing the specific documents or types of documents shown in Attachment 1 as requirements in military or federal specifications and standards, bulletins, or commercial item descriptions. Incorporate this change into MIL-STDs 490, 961, and 962 which govern the requirements for preparing specifications and standards.

Responsibility: The office of primary responsibility to prepare and staff the policy memorandum and initiate the standardization projects to revise MIL-STDs 490, 961, and 962 is the DASD(PR) Standardization Program Division. (Draft memorandum provided at Attachment 2.)

Task 2: Identify those specifications and standards citing references of the type shown in the Attachment. Require the preparing activities to eliminate unnecessary references during the required 5-year review process.

Responsibility: The Service/Agency Standards Improvement Offices will include this requirement in their overall plans to implement this report.

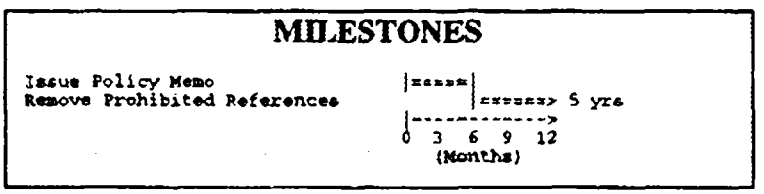
RESOURCE REQUIREMENTS:

Year	1	2	3	4	5
$ MIL	.5	.3	.1	0	0
Man-Years	50	30	10	0	0

METRICS:

- The DASD(PR) Standardization Program Division will evaluate, via sampling, the quality of new/revised military specifications vis-a-vis current policies and procedures including the value of references.

SCHEDULE: Milestone schedule is as indicated.



DRAFT *

PROHIBITED LIST OF REFERENCES IN MILITARY AND FEDERAL SPECIFICATIONS AND STANDARDS, BULLETINS, OR COMMERCIAL ITEM DESCRIPTIONS

The following is a list of the types of documents that shall not be cited as requirements in military or federal specifications, standards, bulletins, or commercial item descriptions. This list is not all-inclusive but is intended to demonstrate, by example, the types of inappropriate references. Typically, reference to these documents is inappropriate because they more properly belong in the contract, they are policy documents directed at government and not contractor personnel, they inhibit use of commercial products or processes, or they represent traditional management approaches that inhibit more creative and effective risk management alternatives.

- All directives, instructions, regulations, or other types of policy documents
- Military Handbooks. These documents are useful for guidance purposes but shall not be cited references in military or federal specifications.
- Data item descriptions (DIDs)
- All military and federal packaging specifications and standards. It is acceptable to specify commercial packaging or reference commercial packaging standards such as ASTM D3958, but government-unique packaging requirements shall be specified in the contract.
- Management oversight specifications and standards, including but not limited to:

MIL-STD-470 Maintainability Program for Systems and Equipment

MIL-STD-499 Engineering Management

MIL-STD-680 Standardization Program Requirements for Defense Acquisitions

MIL-STD-781 Reliability Testing for Engineering Development, Qualification, and Production

MIL-STD-785 Reliability Program for Systems and Equipment Development and Production

MIL-STD-790 Product Assurance Program for Electronic and Fiber Optic Parts Specifications

* Final list will be prepared by the DASD(PR) Standardization Program Division and approved by the ASD(PR).

ATTACHMENT 1

MIL-STD-882	System Safety Program Requirements
MIL-STD-965	Parts Control Program
MIL-STD-973	Configuration Management
MIL-STD-981	Design, Manufacturing and Quality Standards for Custom Electromagnetic Devises for Space Applications
MIL-STD-1388	Logistics Support Analysis
MIL-STD-1465	Configuration management of Armaments, munitions, and Chemical Production Base Modernization
MIL-STD-1482	Human Engineering Design Criteria for Military Systems Equipment and Facilities
MIL-STD-1528	Manufacturing Management Program
MIL-STD-1530	Aircraft Structural Integrity Program, Airplane Requirements
MIL-STD-1535	Supplier Quality Assurance Program Requirements
MIL-STD-1541	Electromagnetic Compatibility Requirements for Space Systems
MIL-STD-1543	Reliability Program Requirements for Space and Launch Vehicles
MIL-STD-1546	Parts, Materials, and Processes Control Program for Space and Launch Vehicles
MIL-STD-1556	Government/Industry Data Exchange Program Contractor Participation Requirements
MIL-STD-1567	Work Measurement
MIL-STD-1568	Materials and Processes for Corrosion Prevention and Control in Aerospace Weapons Systems
MIL-STD-1574	System Safety Program for Space and Missile Systems
MIL-STD-1586	Quality Program Requirements for Space and Launch Vehicles
MIL-STD-1625	Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships
MIL-STD-1634	Module Descriptions for the Standards Electronic Modules Program

MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment
DOD-STD-1700	Data Management Program
MIL-STD-1771	Value Engineering Program Requirements
MIL-STD-1783	Engine Structural Integrity Program
MIL-STD-1785	System Security Engineering Program Management Requirements
MIL-STD-1794	Human Factors Engineering Program for Intercontinental Ballistic Missile Systems
MIL-STD-1798	Mechanical Equipment and Subsystems Integrity Program
MIL-STD-1799	Survivability, Aeronautical Systems
MIL-STD-1800	Human Engineering Performance Requirements for Systems
MIL-STD-1803	Software Development Integrity Program
MIL-STD-1836	Standardization & Control Program for Parts, Materials & Processes Used in Intercontinental Ballistic Missile Weapon Systems
MIL-STD-1843	Reliability Centered Maintenance for Aircraft, Engines and Equipment
MIL-STD-2067	Aircrew Automated Escape Systems reliability and Maintainability (R/M) Program, Requirements for
MIL-STD-2069	Requirements for Aircraft Nonnuclear Survivability Program
MIL-STD-2077	General Requirements Test Program Sets
MIL-STD-2093	Reliability Procedures for Production of Guidance and Control Section for Guided Missile AIM/RIM/7
DOD-STD-2107	Product Assurance Program Requirements for Contractors
MIL-STD-2164	Environmental Stress Screening Process for Electronic Equipment
MIL-STD-2165	Testability Program for Systems and Equipments
DOD-STD-2167	Defense System Software Development
DOD-STD-2168	Defense System Software Quality Program

MIL-STD-2184	Procedures for Installation, Inspection, Maintenance and Repair of Absorber, Reflector and Decoupler
MIL-STD-2186	Real-Time Outfitting Management Information System, General Requirements for
MIL-STD-40000	Parts Control Program for Nondevelopmental Items (NDIS)
MIL-STD-6870	Inspection Program Requirements, Nondestructive, for Aircraft and Missile Materials and Parts
MIL-E-8970	Engine and Related Propulsion and Power Equipment, Aircraft, Acceptance Tests of, Sampling Plan for, Statistical
MIL-Q-9858	Quality Program Requirements
MIL-O-13830	Optical Component for Fire Control Instruments, General Specification Governing the Manufacture, Assembly and Inspection of
MIL-F-13926	Fire Control Material, Manufacture and Inspection, General Specification for
MIL-S-28825	Switchboard, Audio, design, Test and Manufacture of
MIL-P-29005	Publications, Planned Maintenance System, for training Devices
MIL-I-45208	Inspections Systems Requirements
MIL-P-46195	Program Requirements, Nondestructive Inspection, for Weapon Systems, Subsystems, Parts and Materials
ASQC-Q90	Quality Management and Quality Assurance Standards - Guidelines for Selection and Use
ASQC-Q91	Quality Systems - Model for Quality Assurance in Design/ Development, Production, Installation and Servicing
ASQC-Q92	Quality Systems - Model for Quality Assurance in Production and Installation
ASQC-Q94	Quality Management and Quality Systems Elements - Guidelines
AWI-QSGSQCP	Guide specifications and Quality Certification Program, Architectural Woodwork Quality Standards

IS09000 Guidelines for Selection and Use - Quality Management and Quality Assurance Standards

ISO9001 Systems, Quality - Models for Quality Assurance in Design/ Development, Production, Installation and Servicing

ISO9002 Systems, Quality - Model for Quality Assurance and Installation

IS09004 Guidelines - Quality Management and Quality System Elements

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives and Director
Defense Logistics Agency

SUBJECT: Prohibited References in Military and Federal Specifications and Standards, Bulletins, or Commercial Item Descriptions

1. Excessive referencing of other documents in military specifications and standards results in additional costs, making it difficult to identify actual user needs. Management, contractual, special packaging, data, and policy-related documents are examples of different type of documents inappropriately or repeatedly cited in government specifications and standards, which should be contained in the contract language.

2. Enclosed is a list of documents of the type that shall not be cited as requirements in military or federal specifications, standards, bulletins, or commercial item descriptions. This list is not all-inclusive but intended to demonstrate the types of document references that are inappropriate.

Signature Block

ATTACHMENT 2

Tiering of Specifications

RECOMMENDATION: Eliminate the current process of contractually imposing hidden requirements through references listed in equipment/product specifications or noted on engineering drawings.

DISCUSSION: Military specifications and standards are written to provide requirements on a range of engineering and other technical matters. The specifications and standards are normally written with the intent that they will be tailored to the specific application at the time of use. When the specification or standard is not properly tailored for the application (i.e., the whole specification or standard is referenced), unnecessary requirements may be called in with the attendant cost penalties. Most specifications and standards contain references that may add additional requirements. These references then cite other references which add additional requirements and references, and so on.

In recent years, Defense policy has moved from unlimited tiering in all phases of the product/system life-cycle to the current position which makes the tiering problem most apparent during the production/procurement phase of the acquisition cycle. DoDI 5000.2 states current policy as:

- During Concept Exploration and Demonstration/Validation, all specifications and standards are provided for guidance only.

- During Engineering and Manufacturing Development, only those specifications and standards cited in the contract and any references that they cite (first-tier references) are mandatory for use.

- During production, there is no mandatory cut-off point, thus the contractor may be compelled to comply with those specifications and standards specifically cited in the contract and with all derivative references.

To eliminate the chain-reference problem, the DoD should implement a policy change to make directly cited and first-tier references the only contractual requirements. The policy change will require that, prior to an actual contracting action, the description (drawings, specifications, standards, other documents, and models) of the product to be acquired will need to be thoroughly reviewed to determine what requirements should be raised to the direct-cite level. The change can be accomplished through modification of acquisition policy. Change to the Defense Federal Acquisition Regulation Supplement (DFARS) is not required.

BARRIERS: Elimination of tiering will be resisted primarily by buying commands and program offices. Their concerns will be that important requirements may be eliminated by this action.

- Validation of procurement packages will be more time consuming during the conversion period.

- An excessive number of second and lower tier references may be cited directly to reduce risk.

IMPACT: The following impacts result from this recommendation.

PRO:

- Tiering reduction will decrease costs to the Government buying activity as a result of lowering the producing contractor's costs.
- Product quality will improve, since both the contractor and the Government will be able to focus on the properly specified requirements.
- Reducing/eliminating tiering will provide the obvious benefit of eliminating automatic incorporation, through reference, of unneeded or unwanted technical or process requirements.
- Essential requirements will be stated with appropriate tailoring, rather than left to chance.

CON:

- To incorporate tiering reduction in product baselines, there is a visible, up-front, labor cost for data package review.

Response: In reality, this review and update bill will vary by the size and complexity of the purchased item's technical/procurement data package. In most cases, this one-time review will be performed as an integral part of the existing pre-procurement review process. The recommendations elsewhere in this report will assist in reducing the problem.

RISK: The major risk associated with the reduced-tiering policy is that mechanisms for review of existing product descriptions are either ineffective or not in place. Such a condition could increase the risk of unsuccessful contract execution.

IMPLEMENTATION PLAN: Tiering reduction will be implemented by changing acquisition policy, engineering drawing standards, and by updating procurement/technical data packages. The policy change reflected in task 1 should be effective immediately on all new programs. Application of the policy to existing technical data will require judgement and must be phased in.

Task 1: Acquisition Policy. Change Defense acquisition policy in DoDI 5000.2, Part 10, Section C, Acquisition Streamlining, Paragraph 3, Procedures (3.b.(3)), to state that,

> "During production, only those specifications cited, down to and including the equipment/product specifications and their first tier-references shall be mandatory for use. Lower tier references will be guidance only and will not be contractually binding. Specifications listed on engineering drawings are considered to be first-tier references. Approval of exceptions to this policy is

delegated to the Departmental/Agency Standards Improvement Offices and the Director, Naval Nuclear Propulsion (for specifications and drawings used in Naval nuclear propulsion plants)."

Issue interim policy memo (Draft Memorandum is attached).

Responsibility: Office of primary responsibility to prepare and staff this change and interim policy memo is the DASD(PR) Standardization Program Division.

Schedule: Interim change to policy should be distributed immediately by means of a policy memorandum.

- Effective date of the new policy should be set such that buying activities have adequate time to establish necessary review and update mechanisms.
- Distribute interim policy memorandum immediately upon signature.
- Complete DoDI 5000.2 revision within six months after signature of the interim policy memorandum.

Task 2: Modify drawing practice standards. Develop and incorporate appropriate changes to DOD-STD-100 and successor standards to implement the policy stated above. Specifically, indicate that on engineering drawings, only those specifications specifically cited on the drawing will be mandatory for use. First and lower tier references are for guidance only and will not be contractually binding.

Responsibility: The Army Departmental Standards Improvement Office will direct the preparing activity for DOD-STD-100 to initiate the change.

Schedule: Changes should be completed and into DoD-wide coordination within six months after signature of the interim policy memorandum.

Task 3: Update Existing Documents. Develop and implement procedures that will ensure that the technical/procurement description (drawings, specifications, other technical documents) are thoroughly reviewed and updated to determine requirements that need to be raised to the direct-cite level. This one-time review and modification must be accomplished by appropriate preparing activities and design activities.

- Consider existing technical review procedures and focus on most commonly referenced drawings, specifications, or other technical data.
- Most buying activities already have in place a process for technical review of the procurement package.

Responsibility: The office of primary responsibility will be the technical data offices at the buying commands. Progress will be monitored by the Service/Agency Standards Improvement Executives.

Schedule: The required review process can be established within six months of the initial/interim policy.

- Conversion of all active documents in repositories is to be completed within five years after the policy is established. Priority will be given to higher volume/dollar items.

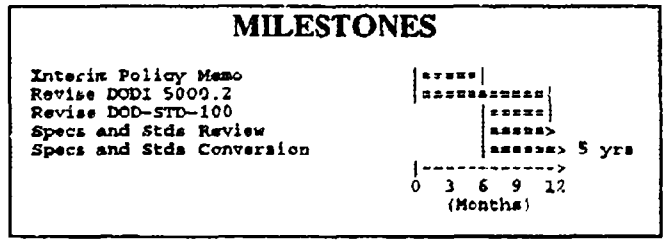
RESOURCE REQUIREMENTS: There is no direct burden on standards funds as a result of this recommendation. There will be a degree of up-front cost associated with technical/procurement data package document review. These costs and work-years will of necessity be borne by the acquisition programs that will use the updated data package. These same programs will be the beneficiary of savings that result from these reviews.

YEAR	1	2	3	4	5
Policy/Regs Funding Doc Review Funding	0 (10M)	0 (10M)	0 (10M)	0 (10M)	0 (10M)
WORK-YEARS	(100)	(100)	(100)	(100)	(100)

Note: Numbers in parenthesis indicate that funds and work-years are not chargeable to the standards program. Technical/Procurement Data Package review for this recommendation will be accomplished in conjunction with the review required to support the Oversight Recommendation elsewhere in this report.

METRICS: Trend charts will be established by the technical data offices at the buying commands, depicting the value of contracts awarded implementing this new policy. The Service/Agency Standards Improvement Offices will track progress.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Interim Change Notice, DoDI 5000.2

1. The following change to DoDI 5000.2, Part 10, Section C, Acquisition Streamlining, Paragraph 3, Procedures (3.b.(3)) is currently being staffed. This advance notice is provided for your action and is effective immediately on all new development efforts. Solicitations must be structured so the resulting production baseline, including technical data and engineering drawings, is developed in accordance with this change.

"During production, only those specifications cited, down to and including the equipment/product specifications and their first tier-references, shall be mandatory for use. Lower tier references will be guidance only and will not be contractually binding. Specifications listed on engineering drawings are considered to be first-tier references. Approval of exceptions to this policy is delegated to the Service/Agency Standards Improvement Offices, and the Director, Naval Nuclear Propulsion (for specifications and drawings used in nuclear propulsion plants)."

2. Procurement Commands are directed to apply this policy on new contracts citing legacy technical data packages and engineering drawings. I would like your plans on how this policy will be applied within 180 days.

Signature Block

ATTACHMENT

Obsolete Specifications

RECOMMENDATIONS: Mandate cancellation or inactivation of new design obsolete specifications and standards that have had no procurement history for the past five years. Cancel all unnecessary data item descriptions

DISCUSSION: A 1992 DoD study prepared by the Department of the Air Force showed that approximately 45 percent of the military and federal specifications and standards listed in the DoD Index of Specifications and Standards are overage (meaning they have not been updated or validated within five years). This statistic, however, is somewhat misleading in that it suggests that a large number of specifications and standards that reflect obsolete technology are being used in the design of new weapon systems or major upgrade of existing systems. In reviewing 2,000 military specification and standards, the Air Force found about 18 percent were not being used in procurement at all and should be canceled. Other specifications and standards were used to support weapon systems that are mature and have been fielded for decades or have been sold to other countries under foreign military sales. While the specifications and standards may not reflect the most current technology, neither do the weapon systems they support. These military specifications and standards need to be changed to inactive for new design, meaning they are to be used only in the support of older equipment and not in future items.

Data item descriptions (DIDs) tend to impose significant DoD oversight on the contractor's processes for engineering management, integrated logistics support, and other program management elements. The DIDs presented in DoD 5010.12-L "Acquisition, Management System and Data Requirements Control List" (AMSDL) must support DoD goals vis-a-vis acquisition reform.

The listing of DIDs in the AMSDL must be reviewed to eliminate data items that are duplicative, unnecessary, obsolete, or are not cost-effective. In addition, to ensure that the management oversight is not circumvented, each Service and Agency should establish procedures to require top-level approval of all one-time data item descriptions.

BARRIERS: There will be a significant one-time resource impact to implement this recommendation, primarily in updating specifications and standards.

IMPACT:

PRO: There will be a significant cost avoidance because of reduced demands for data. There will also be improvement in the selection of data items required by removing obsolete or unnecessary specifications and standards from the active list, thus precluding users from citing improper requirements.

CON: None.

RISK: The risk is minimal. Even if an error is made in removing a specification or standards from the system, it can easily be reactivated.

IMPLEMENTATION PLAN:

Task 1: Fund the Air Force Cataloging and Standardization Center (CASC) to identify the DLA procurement history for the military and federal specifications that have not been used in procurement during the last four and five years. Provide both the four year and the five year lists to the applicable preparing activities to cancel, inactivate for new design, justify retention, convert to Commercial Item Descriptions (CIDs), or replace by Non-Government Standards (NGS).

Responsibility: Office of primary responsibility to conduct the overage specifications and standards review is the U.S. Air Force Cataloging and Standardization Center.

Task 2: Separate the active specifications and standards from the ones designated as "Inactive for New Design" in the DoD Index of Specifications and Standards.

Responsibility: Office of primary responsibility is the Director, Defense Printing Service Detachment Office.

Task 3: Identify and eliminate all data item descriptions that are unnecessary, redundant, or not cost-effective.

Responsibility: The offices for primary responsibility are the Service/Agency Standards Improvement Offices.

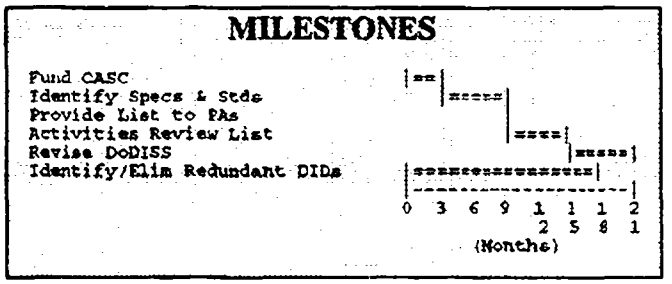
RESOURCE REQUIREMENTS:

Year	1	2	3	4	5
$ MIL	2	1	.1	.1	.1
Man-Years	50	25	5	5	5

METRICS:

- Service/Agency Departmental Standards Improvement Offices (DepSIOs) take an annual sample of specifications, standards, data item descriptions, and other types of specifications and standards to evaluate progress and overall quality.
- Service/Agency DepSIOs track the number of data item descriptions eliminated.

SCHEDULE: Milestone schedule is as indicated.



Chapter Five

Overhauling the Standards Process

It is not enough simply to correct past problems or to ensure that today's military specifications and standards reflect best commercial practice. These efforts capture only a snapshot in time. In an era in which new technology generations are measured in months rather than decades, the real challenge is to create a system that is flexible enough to maintain technological currency throughout the acquisition life-cycle. Meeting that challenge will require considerable modernization of the military specifications and standards process. The PAT examined three areas: the need for better cooperation with industry to develop nongovernment standards; the need to develop automatic feedback systems to improve communication and coordination among preparing activities, industry suppliers and government users; and, particularly for commercial items, the need to consolidate responsibility for specification preparation and item purchase.

One needed reform is to build mechanisms for industry-government cooperation in the development and adoption of nongovernment standards. Nongovernment standards are, as the term implies, standards that can be used by a unified production base since they are developed by the commercial sector. In fact, DoD has already adopted many NGS. But, switching from military specifications and standards to NGS across the board involves more than just changing mindsets or policies. There are many products and processes in the private sector for which no nongovernment standard exists. Sometimes, the NGS may be insufficient to meet DoD's needs. According to standards expert Robert Toth: "Many commercial standards describe only minimum requirements which are too often characterized (even by the private sector) as 'lowest common denominator' standards."[3]

Government-industry cooperation and investment will be essential to develop new standards, to ensure that those standards reflect best industry practices, and to facilitate the merging of the defense and commercial industrial bases. This cannot happen overnight. The PAT estimates that, in some areas, we may be looking at up to a five to ten year transition period. The PAT recommends that industry-government groups be established now to begin that process.

Another critical element is to create better linkage between the industry suppliers, the government users, and the preparing activities. Although suppliers and users are already asked to comment on new military specifications and standards (a process called coordination), they are not typically involved in the requirements determination prior to the first draft. This creates problems in several ways. First, it can result in delays since poor quality initial drafts require multiple coordinations instead of just one or two. Second, it does not promote understanding between the users and suppliers on available commercial

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[3] An Assessment of the U.S. Standardization and Specification Program, R.B.Toth & Associates.

capabilities to meet DoD requirements. Finally, coordination may generate specific comments, but it rarely produces a meaningful exchange of information.

Some DoD organizations have tried to remedy these problems by using market surveys, automated vendor catalog systems, vendor trade shows, industry association meetings, and other techniques to try to gather and exchange information in preparation of draft documents. Certain DoD Activities, such as the Defense Industrial Supply Center, have used the concept of pre-specifications and standards development meetings with industry and Service users to ensure that specifications and standards reflect current commercial practices. The problem is that such pre-draft development work tends to be the exception rather than the rule.

Coordination problems have also arisen in the overage review process. Each military specification and standard in the DoDISS is required to be reviewed at least once every five years. In principle, this is to ensure technical currency, compliance with DoD policies, and to look for commercial opportunities. In practice, because of monetary constraints, this review process (called validation) either is not done at all or is done in a cursory manner to satisfy an administrative requirement.

Industry involvement is essential to improving the quality of specifications and standards in the DoDISS. The PAT recommends that each preparing activity have a formal procedure for soliciting comments from industry suppliers, as well as Service users, during the life span of the specification or standard. Specifications and standards analysis meetings or joint industry-government dialogue during standards improvement committee meetings are important ways to solicit interchange of ideas. The PAT recommends, however, that military specifications and standards with unresolved comments or repeated major waivers and deviations should not be revalidated without resolution of the outstanding issues.

Finally, some reassignments of military specifications and standards will result in more sensible allocation of responsibility. The procurement authority for most commercial items has been transferred to the Defense Logistics Agency from the Services. But the responsibility for preparation remains with the Services which have reduced their specifications and standards staffs dramatically. This is certainly one of the reasons for the large number of obsolete specifications and standards and the slow conversion of military specifications and standards to nongovernment standards and commercial item descriptions. The PAT recommends, for the Federal Supply Classes which consist primarily of commercial products purchased by DLA, that specifications and standards preparation and maintenance responsibilities be transferred to them.

Summary of Recommendation and Implementation Agenda

Recommendation: Encourage an increase in the number of partnerships with industry to develop nongovernment standards for the replacement of appropriate military standards.

- USD(A&T) directs adoption and listing in DoDISS all NGS currently in use by DoD.

- Implement Memoranda of Understanding (MOU) between DoD and nongovernment standards bodies to promote the use of NGS in the design, development, and acquisition of defense materiel.

- Establish evaluation teams to review all Federal Supply Classes and Standardization Areas to identify military specifications and standards that can be converted to NGS or CIDs.

- Establish joint government-industry development projects under the auspices of nationally recognized nongovernment standards developing organizations with the intent of promoting the resultant standards as national, then international standards.

Recommendation: Establish a process to include industry and government users up front in the specifications and standards development and validation processes.

- Institute the concept of up-front requirements determination meetings with industry and government.

- Require each preparing activity to have a formal procedure for resolving feedback and logging the results.

- Issue policy that military specifications and standards may not be validated until all essential comments have been resolved and any need for repetitive major waivers and deviations has been eliminated.

- Establish a toll-free telephone number for industry supplier and customers to resolve specifications and standards issues previously surfaced and unresolved with Service/Agency preparing activities.

- Issue policy requiring Defense Contract Management Command (DCMC) to report to the preparing activity all approved repetitive major waivers and deviations to military specifications and standards.

Recommendation: Assign specifications and standards preparation responsibility to the Defense Logistics Agency (DLA) for Federal Supply Classes that are primarily commercial.

- Direct the Services and Defense Agencies to transfer preparing activity responsibility to DLA for those specifications and standards describing commercial type products where DLA is the FSC procuring activity.

- Negotiate plans for transferring preparing activity responsibility to the appropriate DLA agencies, including federal supply classes to be transferred, specific specifications within the Federal Supply Class to be transferred, sequence of transfer, manpower requirements, and any weapons system peculiar supportability issues.

National Standards

RECOMMENDATION: Form partnerships with industry associations to develop nongovernment standards for the replacement of military standards where practical.

DISCUSSION: Switching from military specifications and standards to nongovernment standards is far more involved than just changing mindsets. For the most part, nongovernment standards (NGS) do not exist for all products and processes used in industry, and their development will require resources from government and industry. Resources for development of international standards are critical to making certain that the U.S. industrial base is not excluded from global competition.

It is important to have industry involved as partners in the development process to ensure that the standards reflect best industry practices and will facilitate the merging of the defense and commercial industrial bases. The benefits of this partnership will be: lower costs, easier access to the latest technology, lower oversight requirements, and ability to readily integrate the two segments of industry. Industry support is also needed to establish priority for the development of these nongovernment standards and to expedite their approval. Even with industry support, we are probably looking at up to 10 years to cross over from military specifications and standards to nongovernment standards in some product areas. This assumption is based on prior history where the DoD and industry have formed partnerships to achieve similar replacement goals.

It will never be possible to replace all military specifications and standards with nongovernment standards since many of them cover military-unique items or processes. Even for commercial products, nongovernment standards technical committees do not exist for many product areas. In some cases, the DoD may be able to partner with industry to create such committees. In other areas, the DoD may have to develop performance-oriented commercial item descriptions. For those occasions when a nongovernment standard may not be a suitable alternative, the DoD and industry must work together to develop performance-oriented military specifications and standards.

U.S. domestic nongovernment standards writing bodies participate in various international standards efforts. They work in unison with the International Standards Organization (ISO) and the International Electro Technical Committee (IEC). DoD participation in domestic NGS efforts will automatically involve participants in international standards development where the domestic society participates with an international organization.

BARRIERS: To develop the needed international and national standards will require significant resources and a willingness to participate from the DoD and industry. Industry has not always been a willing participant in the development of nongovernment standards. In some cases, key companies oppose the development of national standards since they create a level playing field that minimizes the importance of advertising.

IMPACT:

PRO: There will be greater use of commercial and industrial products and processes in the DoD and technology insertion will occur at a faster pace. There is also the potential of improving U.S. global competitiveness by having a single set of national standards that may become international standards.

CON: None.

RISK: Unless DoD personnel have the resources to participate actively in the development of national standards, there is a risk of having inadequate standards that can't meet the DoD requirements. The development of a complete set of national standards will also take many years and there is a risk that senior leaders in the DoD and the Congress will become impatient for results and not stay the course. Also, the commercial sector may be reluctant to accept the burden of specifications and standards without the prospect of increased business. DoD's commitment to fund this effort will convince industry of our resolve.

IMPLEMENTATION PLAN:

Task 1: DepSecDef directs adoption and listing in DoDISS of all NGS currently in use by DoD.

Responsibility: The office of primary responsibility to initiate action is DASD(PR) Standardization Program Division. Service/Agency Standards Improvement Executives will monitor status.

Task 2: Execute Memoranda of Understanding (MOU) between the DoD and the nongovernment standards bodies to promote the use of NGS in the design, development, and acquisition of defense materiel to the maximum extent possible. (Draft MOU is attached.)

Responsibility: Office of primary responsibility to prepare and staff the MOU between the DoD components and the nongovernment standards body is the DASD(PR) Standardization Program Division. Service/Agency Standards Improvement Executives will monitor status.

Task 3: Establish evaluation teams to review all of the federal supply classes and standards to identify documents that can be converted to nongovernment standards or commercial item descriptions or should be retained as military specifications and standards. To the greatest extent possible, these teams should be independent without a stake in retaining the military specifications and standards. Conversion priorities should be established on the basis of usage, and age, or to correct known procurement problems.

Responsibility: Office of primary responsibility to establish teams and identify candidates for conversion or retention is the DASD(PR) Standardization Program Division (in conjunction with the Lead Standardization Activities (LSAs)). Approval authority is the Defense Standards Improvement Council.

Task 4: Establish joint government-industry standards development projects under the auspices of nationally-recognized nongovernment standards developing organizations with the intent of promoting the resultant standards as national, then international standards. Evaluation teams described in Task 2, above, will provide some input for this effort, but we also need to ask the nongovernment standards developing organizations to make recommendations. To expedite development of these standards and show the DoD's commitment, $1 million in initial seed money should be allocated to encourage the nongovernment standards developers. Otherwise, schedules will be determined by volunteers.

Responsibility: The Service/Agency Standards Improvement Executives will monitor joint government-industry standards development projects progress. The Lead Standardization Activities will be responsible for implementation.

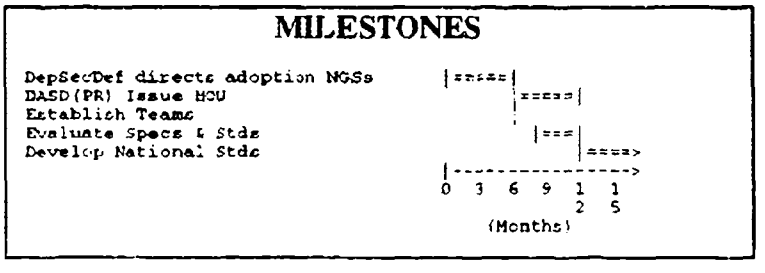
RESOURCE REQUIREMENTS:

Years	1	2	3	4	5
$ MIL	1.9	2.0	.7	.7	.7

METRICS:

- The Standards Improvement Executives report progress to their Service Acquisition Executives, who shall report to the USD(A&T).
- Service/Agency Standards Improvement Offices will track the number of specifications and standards selected for conversion and actually converted.
- DASD(PR) tracks number of military specifications and standards and NGSs in DoDISS.

SCHEDULE: Milestone schedule is as indicated.



Sample

MEMORANDUM OF UNDERSTANDING
DoD/____ COOPERATIVE STANDARDS PROGRAM

1. GENERAL:

a. It is Department of Defense (DoD) policy to use, to the maximum extent possible, nongovernment standards (NGS) in the design, development, and acquisition of defense materiel. Use of NGS in lieu of unique military standards should reduce costs to both the DoD and industry by buying to current production practices. A joint industry/DoD effort in the preparation and maintenance of NGS ensures that the requirements reflect the needs of all parties, and that application of the resulting standard is as wide as possible.

b. This cooperative agreement between the Department of Defense and (Voluntary Standards Body) is designed to foster increased usage of ____ standards specifically, and, in general create and define the infrastructure that could apply to other nongovernment standards bodies (NGSB).

POLICY:

a. DoD will use NGS to the maximum extent possible.

b. DoD will use the most current version of those standards concurrent with ____'s issuance as approved standards.

c. DoD technical experts will participate on designated ___ committees in the development and revision process of NGS, and serve as the DoD coordinating activity.

PROCEDURES:

a. The DoD and ____ will jointly establish techniques that will facilitate the participation of DoD personnel in ____ committee activities.

ATTACHMENT

b. The DoD and ____ will jointly develop procedures for identifying existing ____ standards that can be used instead of existing military standards and specifications. This would include military standards and specifications that can be replaced by existing ____ standards by modifying or by including the DoD-unique requirements in a Supplementary Requirements Section of the ____ standard.

c. The DoD and ____ will jointly identify subject areas for which military standard currently exist or are needed, where no ____ standard exists. In these areas, the DoD will request that the ____ committee develop an ____ standard to replace the military standard or to meet a military need for a new standard.

d. DoD members of ____ committees will fully participate in the development and coordination of ____ standards.

e. ____ committees will attempt to meet the DoD's needs in standards, and work with the DoD to develop ways to meet their requirements, such as supplementary requirements sections, addenda, etc.

f. Coordination and communication between the DoD and ____ points of contact will occur to suggest policy and procedural changes, resolve issues, and to continually maintain awareness.

DoD REPRESENTATIVE:

_____
(name)

_____
(date)

____ REPRESENTATIVE:

_____
(name)

_____
(date)

Specifications and Standards Development

RECOMMENDATION: Establish a process to include industry and government users up-front in the specifications and standards development and validation processes.

DISCUSSION: While DoD preparing activities usually involve industry and government users in the coordination of draft military specifications and standards, the users are not typically included in the requirements determination prior to the coordination draft. To a large extent, the first specifications and standards drafts are prepared in isolation with the expectation that deficiencies will be sorted out during coordination. There are several problems with this approach. First, it can result in delays in issuing the specifications and standards since poor quality initial drafts require multiple coordinations instead of just one or two. Second, it does not promote understanding between the customers and suppliers on available commercial capabilities versus DoD requirements. Third, coordination may generate specific comments, but it rarely produces a meaningful exchange of information that leads to better alternative approaches.

Some DoD organizations are using market surveys, automated vendor catalog systems, vendor trade shows, industry association meetings, and other techniques to try to gather and exchange information in preparation of draft specifications and standards. Certain DoD activities, such as the Defense Industrial Supply Center, have institutionalized the concept of pre-draft development meetings with industry and the Service users to ensure that developed specifications and standards reflect current commercial manufacturing processes. The meetings also serve as a useful forum to identify opportunities for industry and government to work towards development of national standards. What is missing in the DoD is that such pre-draft development work tends to be the exception rather than the standard practice.

DoD organizations need to make a cultural change and invest the necessary resources in more up-front work to reduce coordination time, achieve more technically correct specifications and standards, and reflect current industrial manufacturing techniques.

All military specifications and standards are required to be reviewed by the preparing activity at least once every five years to ensure technical currency and compliance with DoD policies and to look for commercial opportunities. If the specification or standard does not require any changes, it is validated. Unfortunately, to a large extent, the validation process either is not done at all, or it is treated in a cursory manner to satisfy an administrative requirement. Even when a military specification or standard is reviewed, it is often done in a vacuum with little or no user or industry input.

There are two issues surrounding the validation problem. First, there are not enough resources to do the job. Second, there is no accountability for doing the job inadequately. Until senior management places importance on having technologically current specifications and standards that make greater use of the commercial industrial base, it is unlikely the resources will ever be there to review specifications and standards thoroughly. To make senior managers more accountable will require an automated feedback system that reports on

the number and types of comments from users, identifies waivers and deviations to specifications and standards, and tracks specifications and standards actions. Military specifications and standards with outstanding or numerous comments, waivers, or deviations could no longer be routinely validated if a system existed that could alert senior management to potential problems and opportunities.

BARRIERS:

- Shortage of DoD and industry resources
- Absence of an automated feedback system
- Resistance to cultural change

IMPACT:

PRO:

- Better quality specifications and standards that meet the users' requirement
- Items produced using the most current manufacturing techniques
- Improved specifications and standards credibility
- More knowledgeable specifications and standards preparers
- Greater access to industrial base products and practices

CON:

- Increased complexity in specifications and standards development process.

RISK: Industry may become disenchanted because of unfulfilled expectations and choose not to continue participation. Therefore, DoD needs to stay focused, finish specifications and standards on time, and incorporate suggestions made.

Possible "specsmanship" by certain manufacturers may exclude competitors. As a solution, strive to include all potential manufacturers in this process.

IMPLEMENTATION PLAN:

Task 1: Institute the concept of up-front requirements determination meetings with government and industry users.

Responsibility: The Standards Improvement Executives will designate the office of primary responsibility. (See Attachment 1 for associated Draft Memorandum.)

Task 2: Require each preparing activity to have a formal procedure for resolving feedback and logging the results. (See the section on Automated Specifications and Standards Development for the PAT's recommendation on an automated feedback system.)

Responsibility: The DASD(PR) Standardization Program Division will prepare and staff the required policy. (See Attachment 1 for associated Draft Memorandum.)

Task 3: Issue policy that specifications and standards may not be validated until all essential comments have been resolved, and any need for repetitive major waivers and deviations has been eliminated. Successful management of this task depends upon implementation of an automated user feedback system. (Note: The preparing activity can resolve industry comments via a formal letter of nonacceptance providing rationale.)

Responsibility: The DASD(PR) Standardization Program Division will prepare and staff the required policy. (See Attachment 1 for associated Draft Memorandum.)

Task 4: Establish toll-free telephone access at the Office of the Assistant Secretary of Defense (Economic Security) DASD(PR) Standardization Program Division, for industry supplier and customers to discuss and resolve specifications and standards issues previously surfaced and unresolved with Service/Agency preparing activities.

Responsibility: The DASD(PR) Standardization Program Division is responsible for accomplishing this task.

Task 5: Issue policy requiring Defense Contract Management Command (DCMC) to report to the preparing activities all approved repetitive major waivers and deviations to military specifications and standards.

Responsibility: The Director, DCMC will designate the office of primary responsibility. (See Attachment 2 for associated Draft Memorandum.)

RESOURCE REQUIREMENTS: These resources requirements are included in the resource section on Standards Improvement Executive and are not additive to the total resource requirement for this report.

Years	1	2	3	4	5
$Mil	1.0M	.5M	.1M	.1M	.1M
People Years	50	30	20	10	10

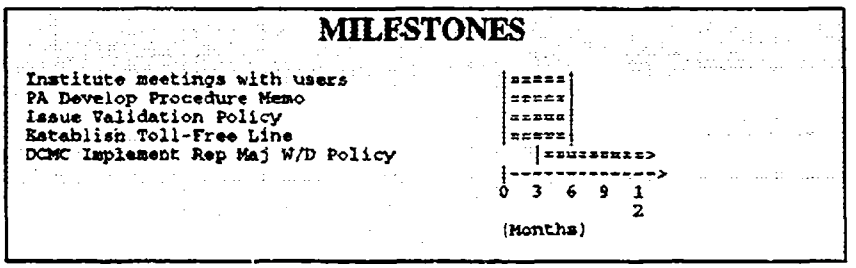
METRICS:

- The Service/Agency Standards Improvement Offices will track the complaints received from the toll-free hot line, the repetitive major waivers and deviations data provided by the DCMC, how the issues were resolved by the preparing activity, and the extent preparing activities included industry in the requirements determination

process. This information will be reviewed with the respective Standards Improvement Executive semi-annually and presented as part of the annual report to the Defense Standards Improvement Council.

- The DASD(PR) Standardization Program Division will evaluate, via sampling, the quality of new/revised military specifications vis-a-vis current policies and procedures.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Determination of Requirements and Feedback Policy for Specifications and Standards

1. The inclusion of interested government and industry entities in the development and revision process for specifications and standards, as well as the validation and cancellation processes, is crucial to effective standards management and the assurance of meaningful standardization decisions. Manufacturers, suppliers, government and industry users and procuring activities have a vested interests in the determination of requirements and the currency of specifications and standards. These entities have the capability and incentive to provide valuable input to the requirements determination process and ensure attainable products and processes.

2. To ensure quality specifications and standards development and maintenance, the following actions shall be incorporated into the process:

a. For new or revised specifications and standards preparation, Preparing Activities (PAs) shall solicit input from known manufacturers, suppliers, procurers and users of the products or processes governed by the specifications or standards. Input solicited shall include, but not be limited to, the project scope, detailed requirements, manufacturing or processing techniques or issues, commercial availability or opportunities and user concerns.

b. For coordination, validation or cancellation actions the PA shall employ a feedback system to provide automated direct communication among government and between government and industry parties. Such a system has been developed by the Navy and is being shared with other government activities.

c. Specifications and standards may not be validated until all essential comments have been resolved and any need for repetitive waivers and deviations has been eliminated. Industry must be advised in writing of the nonacceptance of their comments and the underlying rationale before validation.

3. Provide a plan of action with milestones to implement these process improvements no later than sixty (60) days from the date of this memorandum.

Signature Block

ATTACHMENT 1

DRAFT MEMORANDUM

MEMORANDUM FOR Defense Contract Management Command (DCMC)

SUBJECT: Feedback Requirements on Waivers and Deviations

1. In response to a Department of Defense (DoD) initiative on acquisition reform regarding military specifications and standards, all DCMC activities shall report to the cognizant Preparing Activities (PAs) all approved repetitive major waivers and deviations that affect military specifications and standards. DCMC activities shall employ a feedback system to provide electronic communication to the PAs.

2. Provide a plan of action with milestone to implement this process improvement no later than sixty (60) days from the date of this memorandum.

Signature Block

ATTACHMENT 2

Specifications and Standards Responsibility

RECOMMENDATION: Assign specifications and standards preparation responsibility to the Defense Logistics Agency (DLA) for Federal Supply Classes that are primarily commercial.

DISCUSSION: The majority of DoD commercial-type products are procured by DLA which is responsible for procuring approximately 220 Federal Supply Classes. Of the nearly 29,000 military specifications and standards supporting these classes, DLA prepares about 11,000. The Service laboratories and engineering support activities prepare the remainder.

Post cold-war manpower reductions and the mass transfer of consumable items from the Services to DLA have cut some Service standardization staffs to a fraction of their previous size, resulting in a significantly reduced ability to process and coordinate assigned documents. This helps to account for the large number of out-of-date or obsolete specifications and standards and the slow conversion to commercial item descriptions and nongovernment standards. In some cases, to partially remedy this situation, specifications and standards preparation authority has been transferred to the DLA procuring activity, but specifications and standards responsibility has remained with the preparing activity.

DLA depends on the Service preparing activities to keep military specifications and standards technically current and to help ensure that the proper procurement description (military specification, commercial item description, or nongovernment standard) is used. While specifications and standards preparation and maintenance are primary functions of the laboratories and engineering support activities, their major focus is to provide direct support to a weapon system, subsystem, or product. Preparing and maintaining military specifications and standards is a small part of this support.

An effective way to improve the quality of military specifications and standards in the commercial-type product classes is to transfer the preparing activity responsibilities to the appropriate DLA procuring activity. The close contact of the procuring activity with the commercial manufacturers and suppliers gives them access to the latest technology and processes in the commercial market and in turn enables them to produce more current specifications and standards.

BARRIERS:

- The Services are reluctant to relinquish control of preparation and maintenance responsibility. They believe DLA does not have the technical expertise to maintain the military specifications and standards.

- Any additional manpower required would be funded through the Defense Business Operating Fund (DBOF) by an increase in cost recovery rates.

IMPACT:

PRO:

- More consistent management of specifications and standards.
- Easier insertion of new technology and commercial practices into specifications and standards.
- Faster identification and consolidation or elimination of similar or duplicate specifications and standards.
- Centralized point of contact for specifications and standards information.
- Stronger relationships with suppliers, industry associations, and nongovernment standards bodies.

CON: None

RISK:

- "End Item" application expertise might be lost.
- DLA could be overwhelmed by the significant increase in workload.

Response: Risk can be reduced by careful planning and execution of the specifications and standards transfer process. Transfer specifications and standards only after the recipient is ready to do the job.

IMPLEMENTATION PLAN:

Task 1: Direct the Services and Defense Agencies to transfer preparing activity responsibility to DLA for specifications and standards describing commercial-type products where DLA is the Federal Supply Class procuring activity. (Draft Memorandum is attached.)

Responsibility: The Deputy Assistant Secretary of Defense (Production Resources) is responsible for preparing a directive for the Under Secretary of Defense (Acquisition & Technology) signature.

Schedule: Six months after approval of this report.

Task 2: The Services and DLA will negotiate detailed plans, outlining the transfer of preparing activity responsibility to the appropriate DLA agencies. The plan will include the Federal Supply Classes to be transferred, the specific specifications and standards within the Federal Supply Classes to be transferred, the sequence of transfer to be followed, and the manpower. Discuss, in detail, the transfer of any manpower from the Services required by DLA to perform this function and any weapon system peculiar supportability issues. Rough estimates indicate that 8,000 military specifications could be involved in the transfer, which

would in turn require approximately 130 positions to perform the additional work. The losing Service will be responsible for preparing DD Forms 1865 to change the DoDISS indicating the new preparing activity.

Responsibility: The Defense Logistics Agency, as lead, is responsible for negotiating specifications and standards transfers with the Services. The Deputy Assistant Secretary of Defense (Production Resources) will monitor progress and ensure compliance with directives.

Schedule: The transfer plan negotiations will begin one month after issue of the directive with all transfers completed within four years.

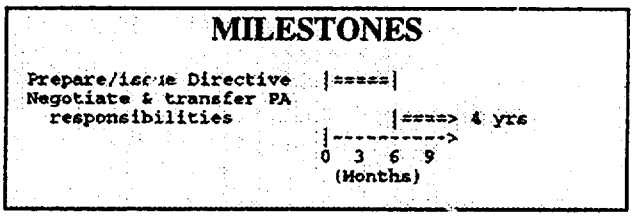
RESOURCES REQUIREMENTS: None.

METRICS: The DLA Standards Improvement Executive will establish trend data and track progress by Service using the following criteria:

- Transfer start date
- Total number of specifications and standards to be transferred
- Number of specifications and standards transferred
- Transfer completion date

Data will be collected quarterly for the four year transition period, then forwarded to DASD(PR).

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives and Director,
Defense Logistics Agency

SUBJECT: Specifications and Standards Transfer to Defense Logistics Agency (DLA)

1. Recent defense manpower reductions combined with mass consumable item transfers to DLA have resulted in some Service specifications and standards preparation and maintenance staffs being cut to a fraction of their previous size. As a consequence, our ability to process and coordinate specifications and standards has been seriously eroded. This accounts for a substantially large number of out-of-date or obsolete specifications and standards and slow conversion of military specifications and standards to commercial standards.

2. With that in mind, in order to improve the overall quality of our specifications and standards and speed commercialization of military equipment, the Services shall transfer specifications and standards preparation and maintenance responsibility to DLA for those specifications and standards which are primarily commercial in nature.

3. To expeditiously accomplish this task, you are requested to prepare detailed plans outlining the specific Federal Supply Classes to be transferred, the sequence of transfer, any additional manpower required by DLA, and any weapons system peculiar supportability issues. The objective is to complete these transfers within four years. I ask the DLA Standards Improvement Executive to take the lead in this initiative.

Signature Block

ATTACHMENT

Chapter Six

New Management Tools

Changes in the specifications and standards process are related to the larger acquisition reform picture. New acquisition management tools are needed to implement a change in emphasis from risk avoidance to risk management and from low cost to best value. The PAT has proposed a number of new management tools and techniques to aid that transition.

Adopt process controls for quality management: To ensure that contractors have adequate process controls, government contracts frequently invoke a number of quality management standards such as MIL-Q-9858 that consume tremendous resources in oversight. The irony is that commercial quality systems are now more cost-effective and efficient than those imposed in defense contracts, while achieving or exceeding the required quality levels. They often rely on process control techniques to achieve robust designs and quality manufacturing.

The PAT recommends that military-unique quality control standards, such as MIL-Q-9858, should be inactivated for new contracts and replaced with American National Standards Institute (ANSI) standard Q90-94 or ISO 9000 series quality standards. Preference for these nongovernment quality standards must be incorporated into defense acquisition regulations. DoD should also undertake a thorough review of all technical documents (specifications, standards, drawings, models or other documents) that reference military quality standards, including fixed allowable defect level requirements, in order to insert the preference for process controls.

Test and Inspection Procedures: The Development and production test and inspection costs over the life cycle of an item significantly increase the cost of developing, producing, fielding, and sustaining defense systems and materiel. They are based on a "how-to" risk-avoidance culture and enforced contractually through test programs, quality assurance provisions, and inspection of details identified on drawings within the technical data package. They are incompatible with the concept of giving the contractor responsibility for quality processes and products which is a requisite for performance-based specification. Finally, they impose requirements that are inconsistent with proven commercial techniques such as continuous evaluation, simulation, environmental testing, dual-use test facilities, process controls, and continuous process improvements. The PAT recommends that each Service establish a goal to reduce the cost of contractor related development and production test and inspection. It also recommends that each DoD component be assigned the task of maintaining a central library database of existing government test facilities which can be made available to other Services or private firms working on government contracts.

Automated Information Management: Today, the standards process is dependent on an anachronistic paper mail system for dissemination of documents and receipt of comments. There is limited electronic access to standards libraries that would provide information on commercial alternatives, nongovernment standards, or on DoD documents with unresolved

problems that are undergoing review. A needed tool in standards management is automation, both to accelerate the reform program and to close the gaps between industry and government standards. Automated communication systems can break down the barriers between the DoD preparing activities and the DoD users by tracking proposed changes to or deviations from the standard. They can link industry directly into the specifications and standards preparation and review processes. They can educate preparing activities on the wealth of nonmilitary solutions available to them. The PAT recommends that DoD make the necessary resource investment to modernize its electronic data and communication capabilities and to integrate the automated system across the Services and Agencies with a Acquisition Integration Corporate Information Management Office.

Requirements Generation: Requirements for new systems are typically generated by "user pull" or "technology push." Either way, they often result in the development and procurement of a system whose costs far exceed its value. The problem is that although performance estimates tend to be reasonably accurate, cost and schedule estimates are far less reliable, assuming that cost-performance trade-offs are made. There are emerging technologies which can help reduce the uncertainties inherent in the development of a new weapons system by merging cost, schedule, performance, and dual-use criteria in a simulated environment. Distributed Interactive Simulation (DIS) provides a virtual reality tool to evaluate alternative solutions, including commercial solutions, prioritize specific performance requirements in a simulated combat arena, test how well alternative system designs will perform in combat, identify problems in the manufacturing process -- all without leaving the computer screen. DIS should be able to materially shorten the acquisition cycle by anticipating and resolving design uncertainty before there is any commitment to a specific hardware design. The PAT recommends that DoDI 5000.2 be revised to state a preference for DIS and other modeling techniques. Also, that policy guidance be issued to encourage the use of cooperative agreements with industry to expand the databases on commercial alternatives that can be evaluated in DIS and to foster dual use technologies.

Pollution Prevention: DoD specifications and standards are too often at odds with environmental protection goals, sometimes requiring the use of known pollutants. There is no clear corporate strategy to address pollution prevention issues or assigned responsibility for eliminating toxic pollutants from the DoD inventory. The PAT recommends that a Toxic Pollutant Panel be established to integrate environmental leadership into the acquisition process and to modify documents that require the use of toxic pollutants.

Summary of Recommendations and Implementation Agenda

Recommendation: Direct government oversight be reduced by substituting process control and nongovernment standards in place of development/production testing and inspection and military unique quality assurance systems.

- Revise DoDI 5000.2 to replace references to MIL-Q-9858 with the requirement to use process control.
- Develop and incorporate changes to defense acquisition regulations to indicate that contractors are strongly encouraged to use process controls that comply with ANSI Q90-94 or ISO 9000 Series quality standards.
- Issue policy memorandum to encourage greater use of process controls in lieu of selected development/production testing and inspection.
- Develop a priority action list of military specifications containing fixed allowable defect level measures. Initiate action to eliminate requirements for these defect measures.
- Implement procedures to review and update technical data, deleting references to military quality, testing and inspection requirements and substituting process controls and/or ANSI Q90-94 or ISO 9000 Series quality standards.

Recommendation: Direct a goal of reducing the cost of contractor-conducted development and production test and inspection by using simulation, environmental testing, dual-use test facilities, process controls, metrics, and continuous process improvement.

- Provide direction and guidance to Program Managers.
- Assign each DoD component the task of maintaining a central library database of existing high-value government test facilities for use by other Services or private firms working on government contracts.

Recommendation: Assign Corporate Information Management (CIM) offices for specifications and standards preparation and use. Direct the use of automation to improve standards development, adoption, and application. (Note: There are three recommendations addressing these issues.)

- Assign an Acquisition Process Corporate Information Management (APCIM) office to assume these automation tasks; assign an Acquisition Integration Corporate Information Management (AICIM) office to integrate all CIM efforts within OUSD(A&T).
- Develop prioritized list of nongovernment standards to be digitized and incorporated into electronic standards libraries.
- Provide searching, authoring, coordination, feedback, and networking tools to activities that prepare military specifications and standards.
- Establish database of nongovernment standards that are equivalent to military standards.
- Provide automated expert-system aids incorporating acquisition reform rules to procuring activities.

Recommendation: Use Distributed Interactive Simulations (DIS), Design-to-Cost (DTC) and Cooperative Research and Development Agreements (CRADAs) to achieve aggressive cost-performance trade-offs and dual-use capabilities.

- State a preference in DoDI 5000.2 for use of DIS and modeling to provide a synthetic real-time environment for assessment of combat effectiveness in an integrated force environment and to support critical assessments of cost effectiveness of proposed requirements.

- Issue a policy encouraging use of CRADAs to expand simulation databases and nodes and to foster dual-use opportunities.

Recommendation: Direct the establishment and execution of an aggressive program to eliminate, or reduce and identify the quantities of toxic pollutants procured or generated through the use of specifications and standards.

- Appoint a Toxic Pollutant Panel to integrate environmental leadership into the acquisition process.

- Obtain from the Environmental Protection Agency an integrated list of substances meeting the current definition of toxic chemicals and sponsor a search of DoDISS documents containing references to these substances.

- Revise these documents either through cancellation, conversion to a performance specification, or substitution of a less toxic substance.

Oversight

RECOMMENDATION: **Direct government oversight be reduced by substituting process control and nongovernment standards in place of development and production testing and inspection and military unique quality assurance systems.**

DISCUSSION: For many defense acquisitions, the procurement data packages and associated military product specifications contain military-unique quality assurance and quality control provisions that are based on test or inspection of the product.

Practice has been to require test, examination, and evaluation for requirements, ranging from incidental dimensions to critical performance requirements, at ambient and extreme environments. Evaluations of these end-state requirements establish quality as a characteristic of the finished product, and are often viewed as an attempt to inspect quality into the product. These evaluations add significant cost to the product, and these costs seldom receive full consideration in establishing the quality assurance provisions in the procurement/technical data package specifications and drawings. Once established, these provisions go unchanged, even though the producing contractor has demonstrated an acceptable process control capability.

Modern manufacturing firms rely on ensuring that products have robust designs and that manufacturing processes are under control as the means to achieve the requisite product quality. They achieve process control by using appropriate process control techniques.

To ensure that contractors have adequate quality assurance programs, government contracts frequently invoke quality management program requirements through the use of military specifications and standards such as MIL-Q-9858 and MIL-I-45208. These military standards perpetuate inspection rather than process control. Many companies now have quality systems that comply with commercial/nongovernment standards, such as American National Standards Institute Standards/American Society for Quality Control (ANSI/ASQC) Standards Q90-94 or the International Organization for Standardization (ISO) 9000 quality standard series.

Quality assurance and inspection techniques such as using Acceptable Quality Levels (AQLs) as a means to measure conformance to requirements must give way to more accurate and less labor intensive practices like process control.

Today's commercial quality systems are equal to or surpass the MIL-Q-9858 and MIL-I-45208 quality standards. Commercial quality systems are more efficient and cost-effective than those quality requirements imposed in current defense contracts if for no other reason than that one system is cheaper to maintain than two or more systems.

BARRIERS: Resistance to this recommendation will come from elements of Product Assurance, ranging from the buying commands and program offices to OSD. Additional concerns may be voiced by competition and small business advocates.

- As the military services transition to commercial/nongovernment quality standards there is a possibility that military handbooks containing guidance on how to properly apply the nongovernment standards will be overly applied. Significant supplementation of standards such as ISO 9000 will lead to a unique military version.

- Current procurement/technical data packages are replete with specified sampling and inspection requirements. Cognizant configuration management activities view the workload associated with changing to the use of process control techniques as too costly and time-consuming.

- The culture at many buying activities (and many program offices) is that inspection reduces risk.

- It will require significant resources and time to revise active technical data packages.

IMPACT: The following impacts result from this recommendation.

PRO:

- Reduced oversight achieved by implementing process control and reliance on commercial quality systems will lower the cost of producing military materiel. This savings results from reduced inspection equipment, and labor intensive inspection and measurement, reduction in scrap and rework through process improvement, and the elimination of military-unique systems.

- Robust designs, continuous process improvement, and application of rigorous process controls provide for better overall product quality than is achieved through inspection and measurement. Process control also reduces or eliminates scrap and/or rework, thus reducing cost as well as improving quality.

- Moving from military-unique to commercial quality systems will enhance the ability of the nondefense industrial base to meet defense needs.

- Commercial quality systems, robust designs based on performance requirements, and good/continuously improving processes allow commercial firms to establish long-term buyer-seller relationships. These relationships are key to acquisition reform.

CON:

- There will be a significant cost to review and update existing procurement/technical data packages.

Response: Experience has shown the near term payback will far exceed costs. For example, one Army command had a validated net savings of $42M in the first year of the program.

RISK: Changing quality systems may impose new burdens on small businesses and could increase the potential of accepting an unacceptable product.

- Implementation may cause some small businesses to have difficulty affording the resources required to establish and maintain an adequate quality system that can be certified as conforming to the ANSI/ ASQC Q90-94 or ISO 9000 quality standards.

Response: The ISO-9000 series of quality standards is tailored to both small and large businesses. Statistical process control is easily taught to production line workers and will get them involved in process improvement. Small businesses will be more competitive and profitable.

- Reduction or elimination of inspection and measurement requirements may lead to an increased potential that we will accept a bad product.

Response: Conversely, the continuously improving, under control processes will make it more likely that after implementing the recommendation, the overall quality level of all products that we accept on the contract will be better than before implementation.

IMPLEMENTATION PLAN: This recommendation will be implemented by changing acquisition and procurement policy, updating existing procurement/technical data packages, and training the DoD workforce.

Task 1: Acquisition Policy. Revise Defense acquisition policy in DoDI 5000.2, Part 6, Section P, Quality, Paragraph 3, Procedures, Subparagraph 7 j, Additional Guidance, to delete the reference to [MIL-Q-9858], and to state that,

> "Defense acquisition programs should reduce government oversight by substituting process control and commercial systems for development and production testing and inspection requirements in procurement/technical data packages. During production, the Program Manager should strongly encourage use of process control techniques and quality systems that comply with commercial standards, American National Standards Institute (ANSI) Standards Q90-94, or the International Organization for Standardization (ISO) 9000 quality standards."

NOTE: Utilization of quality standards such as ISO 9000 on DoD contracts would not require companies to be certified and registered as conforming to the standard. Although companies may feel certification and registration are desired or required to do business in general, they are not an additional cost of doing business with DoD.

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

Schedule:

- Set the effective date of the new policy such that buying activities have adequate time to establish necessary review and update mechanisms.

- Distribute an interim policy memorandum to implement the change.

- Complete revisions to DoDI 5000.2 within 12 months after signature of the interim policy memorandum.

Task 2: Procurement Regulation Changes. Develop and incorporate appropriate changes to Part 246 (Subparts 246.2 and 246.4) of the Defense Federal Acquisition Regulation Supplement (DFARS) to implement the policy stated above, specifically indicating that, in production contracts, contractors are strongly encouraged to use process control techniques and quality systems that comply with commercial standards, such as American National Standards Institute (ANSI) Standards Q90-94 or the International Organization for Standardization (ISO) 9000 Services quality standards.

Responsibility: Office of primary responsibility to prepare and staff the DFAR case is the Deputy Assistant Secretary of Defense (Production Resources).

Schedule: The DFARS case and appropriate regulatory language changes should be completed and sent to the Office of Management and Budget within 12 months after signature of the interim policy memorandum.

Task 3: DepSecDef issues a policy memorandum emphasizing greater use of process controls in lieu of development and production testing and inspection. This change must then be incorporated into MIL-STDs 490, 961, and 962 which govern the requirements for preparing specifications and standards. (See Attachment 1.)

Responsibility: The office of primary responsibility for this action is the Deputy Assistant Secretary of Defense (Production Resources). The DASD(PR) Standardization Program Division will include necessary changes in the standards projects to update MIL-STDs 490, 961, and 962.

Schedule: Policy memorandum should be issued within 6 months.

Task 4: Develop a priority action list of military specifications containing fixed allowable defect level measures such as Acceptable Quality Levels or Lot Tolerance Percent Defect. Initiate action to eliminate requirements for these defect measures. Past procurement history and projected procurement requirements will be used as the criteria for priority action. (Note: this task should be worked in conjunction with the section Obsolete Specifications, Task 1.)

Responsibility: Office of primary responsibility to provide procurement history is the U.S. Air Force Cataloging and Standardization Center. The Standardization Office, AFMC, will provide a listing of all military specifications that contain fixed allowable defect levels sorted by preparing activity. The Service/Agency Standards Improvement Offices will be responsible for notifying preparing activities and approving schedules. Preparing activities will each develop a priority action list and revise military specifications accordingly.

Schedule: The procurement history data and list of military specifications containing fixed allowable defect levels should be provided to the preparing activities within nine months. Revisions to documents supporting high dollar procurements should be made immediately. Revisions to other priority documents will be accomplished in accordance with the schedules developed in support of task 5 below.

Task 5: Update Existing Specifications and Standards. Develop and implement procedures that will ensure that the technical/procurement description (drawings, specifications, standards, quality assurance provisions, other documents, and models) of the product to be acquired is thoroughly reviewed and updated to determine the specific quality and inspection requirements that need to be modified or eliminated to incorporate process control and/or ANSI Q90-94/ISO 9000 quality standards.

- The specifications and standards review and modification must be accomplished by buying activities (buying activities already have in place a process for technical review of the procurement package).

- Focus on items where expensive testing and inspection are cited.

- There will also be other reviews that result from implementing other recommendations in this report. The concept is that specifications and standards review/update occurs at time of use.

Responsibility: Buying Activities (with approval of the cognizant design activity), and Service/Agency Standards Improvement Executives will monitor progress.

Schedule: The required specifications and standards review process will be established within four months of the initial/interim policy.

- Conversion of all active specifications and standards in repositories to be completed within five years after the policy is established.

Task 6: Training. Train DoD procurement and quality personnel about process control and the elements and methodology of ANSI/ASQC Q90-94/ ISO 9000 quality standards. Since the private sector is already accomplishing this training function and training resources are already available, no development will be required. All that is required is a commitment and some out-of-pocket expenses to bring the necessary Government personnel up to speed. Many quality assurance personnel are familiar with process control techniques and ISO 9000/Q90-92 standards and require no additional training.

Responsibility: Office of primary responsibility will be the product assurance elements at the buying commands. Service/Agency Standards Improvement Executives will monitor progress.

Schedule: The training program can be implemented immediately (since no development is required). Completion of training the necessary members of the acquisition workforce should be accomplished in two years. Many quality assurance personnel are familiar with process control techniques and the ISO 9000/Q90-94 standards and require no additional training.

RESOURCE REQUIREMENTS: There is no direct burden on standards funds as a result of this recommendation. There will be a degree of up-front cost associated with technical/procurement data package review. These costs and work-years will of necessity be borne by the acquisition programs that will use the updated data package. These same programs will be the beneficiary of savings that result from these reviews.

YEAR	1	2	3	4	5
Policy/Regs Funding Doc Review Funding	0 (10M)	0 (10M)	0 (10M)	0 (10M)	0 (10M)
WORK-YEARS	(100)	(100)	(100)	(100)	(100)

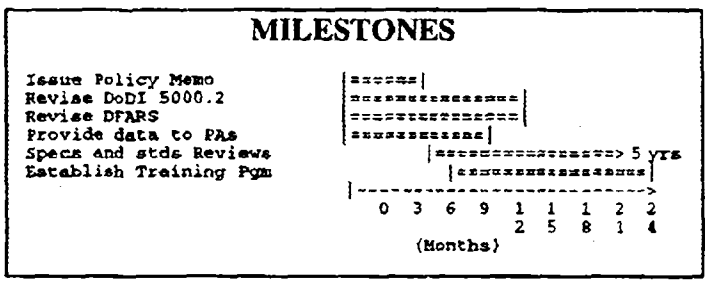
Note: Numbers in parentheses indicate that funds and work-years are not chargeable to the standards program. Technical/procurement data package review for this recommendation will be accomplished in conjunction with the review required to support the Misapplication of Documents Recommendation elsewhere in this report.

METRICS:

- Trend charts will be established by the product assurance elements at the buying commands depicting the transition to commercial quality systems and tracked by the Service/Agency Standards Improvement Offices. The Service/Standards Improvement Executives will review progress.

- Charts will be developed by the Service/Agency Standards Improvement Offices to track the reduction of military specifications, containing AQLs or LTPDs. This data will be presented annually to the Defense Standards Improvement Council.

SCHEDULE: Milestone schedule is as indicated. Part of the effort is the review of on-going contracts for opportunities to eliminate tests.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Greater Use of Process Control in Contract Requirements

1. Excessive use of development and production testing and inspection requirements in military specifications and standards results in additional manufacturing costs and unnecessary deviation from commercial practices, with no additional value added. While few would argue the need to verify conformance to contract requirements, alternative processes would allow a reduction of testing and inspection requirements in government contracts, while maintaining product reliability.

2. Therefore, SAEs will require their PEOs and DRPMs to use manufacturing process controls in contract solicitations while reducing test and inspection typically cited in military specifications and standards. This includes the consideration of alternative process control procedures offered by bidders in response to solicitations and as change proposals after contract award.

Signature Block

ATTACHMENT

Contractor Test and Inspection

RECOMMENDATION: **Direct a goal of reducing the cost of contractor-conducted development and production test and inspection by using simulation, environmental testing, dual-use test facilities, process controls, metrics, and continuous process improvement.**

DISCUSSION: The requirements for contractor-conducted test and inspection for some defense procurements have significantly increased the cost of developing, producing, fielding, and sustaining these defense systems and materiel.

The acquisition environment has evolved into multiple laws, regulations, and directives that result in testing and inspection requirements, quality assurance provisions, and quality program requirements designed to minimize or eliminate risks in defense procurements.

Current requirements for contractor test and inspection programs are based on traditional DoD engineering practices, and are enforced contractually through statement of work test programs, quality assurance provisions of specifications, and inspection requirements listed on detailed engineering drawings. The numbers of tests need to be large enough to demonstrate with high statistical confidence that specified requirements and quality levels have been achieved. The contractor's test and inspection plans, procedures, equipment, and reports are approved by the government and are sometimes verified by additional independent government tests. Dual-use by government and industry of high-cost test facilities has not been emphasized. As long as these inefficiencies were affordable and tolerated, there was no incentive for process improvement or cost reduction. The application of technologies and techniques such as computer modeling, simulation, and process control offer opportunities to decrease the overall cost of contractor-conducted test and inspection.

Performance and quality of defense systems and items must be rapidly and economically ensured through a process of continuous evaluation and improvement that builds a pyramid of information founded in the technology base. Justification for testing should be based on filling informational voids not answered through modeling, analysis, or simulation. Key factors in reducing cost and time for contractor-conducted test and inspection are early involvement of inspection personnel, testers, and evaluators on concurrent engineering teams, increased use of modeling and simulation, and dual-use of high cost test facilities. Rapid prototyping and fast turnaround investigations of technologies will require more advanced means of exercising systems, analyzing failures, collecting information, and feeding this information back to the contractor or laboratory to improve the product and the manufacturing process. Process controls and continuous process improvement in the design, manufacturing, and test process have provided improved performance and quality with significantly reduced acquisition cost. Guidelines for such a program have been defined in AMC Pamphlet 715-16, 15 July 92, Program for Continuous Process Improvement, and have been utilized by defense contractors in achieving significant cost reductions. This pamphlet can be obtained from HQ

Army Materiel Command, ATTN: AMCRD, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.

The DoD policy of "contractor responsibility for manufacturing quality" must be based on a strong preference for process control and continuous process improvement. It must be implemented through the application of commercial specifications, standards, and practices; certificates of conformance; nationally recognized third-party certification; and the consideration of past performance in source selection.

BARRIERS: Barriers to implementation are primarily associated with cultural and procedural changes within the government and defense industry community, rather than with hardware and software technical limitations.

Zero-Risk Approach:
In the current environment, the government is attempting to ensure that any definable level of risk in the development or production of an item is minimized or avoided. In so doing, the government is essentially relieving the contractor of responsibility and liability for product performance and quality by defining in detail the test and inspection criteria and the basis for acceptance; and by approving the contractor's test plans, test procedures, test equipment, and test reports.

Pass/Fail Criteria:
The contractor oversight community has driven the test process into a pass/fail event. This philosophy has resulted in contractor-conducted development and production test and inspection that is beyond what may be reasonable to reduce risk to an acceptable level.

Detailed Technical Data Packages:
This culture is further reinforced by the current use of detailed specifications, test requirements, and TDPs, which not only specify the item's performance requirements but also how the item and its components must be designed, built, and tested to ensure their conformance to all requirements regardless of contractor's use of process controls and capabilities.

IMPACTS:

PRO: ;

- Streamlining the contractor test and inspection process by using proven techniques and alternatives to reduce test requirements will minimize or eliminate duplicate or redundant testing, inspection, facilities, and cost in the acquisition process.

- Greater use of performance specifications, process controls, and continuous process improvement incentives will significantly reduce acquisition cost and time. This will be facilitated by modification of the government oversight/approval process.

- The application of commercial specifications, standards and practices, certificates of conformance, and past performance consideration in source selection will increase contractor responsibility for performance and quality in keeping with commercial practices.

- The consideration of past performance in source selection will foster contractor self-assessment and continuous process improvement, replacing the aversion to risk, pass/fail culture in the current environment with increased contractor responsibility for performance and best value.

:ON:

- Training is required to enable government and industry test and inspection personnel to be able to effectively participate in concurrent engineering teams, to rely on process controls and continuous process improvement, and accept the use of nongovernment specifications, standards, and practices in the defense acquisition process.

  Revisions to DoD's policies may be resisted by government and industry personnel who are unfamiliar with the application and benefits of process control, continuous process improvement, and other modern tools.

- Improper or inappropriate application of concurrent engineering or continuous process improvement techniques can resul' in defense acquisitions without adequate contractor-conducted test and inspection programs.

RISK: There is a perception by some government personnel that there are increased risks that :efense products may not meet all user needs without the complete and detailed definition of equirements and considerable test and inspection of the contractor's product. This perceived sk can be mitigated by greater emphasis on process control, continuous process improvement, and evaluation of past performance history.

I !PLEMENTATION PLAN:

T. SK 1: DepSecDef issues a memorandum establishing a goal for PMs to reduce the cost of c) ractor-conducted/related development and production test and inspection by incorporating in.t all contracts process control, continuous process improvement through the use of metrics, anc)ther proven techniques to simultaneously improve performance and quality while redu ing contractor test and inspection cost. (Contractor related test and inspection includes pro.a ction lot acceptance testing conducted on government test ranges.) Buying Commands and I EO/PMs should be permitted to utilize a portion of the savings as an incentive to accon plish additional reforms. (see Attachment 1).

Res; onsibility: The Principal Deputy Under Secretary of Defense (Acquisition & Technology) will be the primary office of responsibility to develop and staff the policy memo.

TASK 2: The revised policy in the section on Performance Specifications, Task 3, will be provided to Program Managers as guidance. This change will establish contractor responsibility for quality and provide the framework to reduce test and inspection costs.

"Quality Assurance requirements delineated in performance specifications shall be the responsibility of the contractor, unless otherwise stated in the contract. The contractor shall certify to the government that the item or items offered for acceptance and delivery satisfy the requirements of the specifications through process controls and inspections. Process controls

are the preferred method for contractor quality assurance. The government, at its discretion, may witness such contractor process controls or inspections and provide notification of such intent to the contractor."

Responsibilities: The office of primary responsibility to issue policy guidance and staff the revisioning is the DASD(PR) Standardization Program Division.

TASK 3: Assign each DoD Component the responsibility to update and support a central library database of existing high-value government test facilities for possible use by the owning service, other services, contractor, or private industry firms performing work on government contracts. The TECNET Test and Evaluation Assets Database will be evaluated for use as this central database. Government-owned facilities will be made available to contractors to conduct contractor testing.

Responsibilities: The office of primary responsibility will be the Director for Test and Evaluation (Principal Deputy Under Secretary of Defense (Acquisition & Technology)).

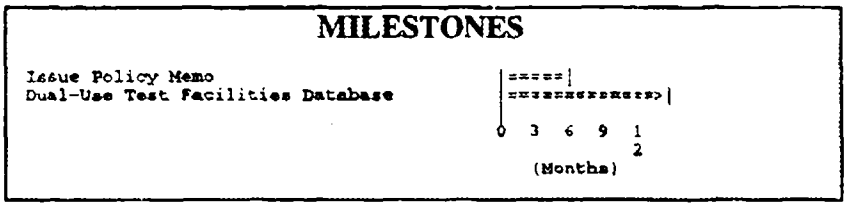
TASK 4: Provide access to TECNET test assets database to contractor test and inspection personnel through contractual clauses.

Responsibilities: The office of primary responsibility will be the Director for Test and Evaluation (Principal Deputy Under Secretary of Defense (Acquisition & Technology)).

RESOURCE REQUIREMENTS: No additional resources are required.

METRICS: Reduction in number of specifications and standards specified in contracts.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Directors of Defense Agencies

SUBJECT: Reduction of Cost of Contractor Development and Production Test and Inspection

Each DoD Component should establish a goal of reducing the cost of contractor-conducted/related development and production test and inspection by increasing the use of process control, continuous process improvement, and other proven techniques to improve performance and quality. (Contractor related test and inspection includes production lot acceptance testing conducted on government test ranges.) Correspondingly, military specifications and standards specified in contracts should be replaced with commercial specifications and standards where applicable. The Director of Defense Procurement will take appropriate action to review the existing department level policies and procurement regulations to ensure that this initiative is not hindered, but encouraged.

Each Component buying command and PEO/PM should be permitted to utilize a portion of the savings as an incentive to accomplish additional reforms. The continued replacement of testing and inspection by continuous process improvement programs will be of great value to the Department of Defense and your agency.

Signature Block

ATTACHMENT

Corporate Information Management for Acquisition

RECOMMENDATION: Assign Corporate Information Management (CIM) offices for specifications and standards preparation and use.

DISCUSSION: On 16 November 1990, The Secretary of Defense directed the implementation of the DoD Corporate Information Management (CIM) initiative to provide consistent guidance to the Department on how to apply information technology to improve the processes by which the Department carries out its missions. The CIM initiative provides the policies and procedures to guide the improvement of business processes through the application of information technology (automation).

As shown in Figure 1, the CIM initiative divided DoD activities into three mission areas: (1) intelligence, (2) business and (3) command and control. The business mission area was further divided into four functional enterprise areas: fiscal resources, human resources, materiel resources, and information management resources. Materiel resources were further divided into the following functional areas: logistics, procurement, acquisition, and research and development.

OUSD (A&T) is redefining its functional areas as follows: logistics, environmental security, procurement, economic security, science and technology, test and evaluation, program management, and acquisition integration. CIM offices have been established in the first three functional areas only. The PAT recommends the creation of two additional CIM offices within the Office of the Under Secretary of Defense for Acquisition and Technology (OUSD(A&T)): (1) an Acquisition Process CIM (APCIM) Office and (2) an Acquisition Integration CIM (AICIM) Office.

The PAT recommends that the Office of the Under Secretary of Defense (Acquisition & Technology) designate where this Acquisition Process CIM (APCIM) office will reside, and that this office serve as the functional proponent for implementing the PAT recommendations on automated specifications and standards development and automated acquisition aids. To ensure that the initiatives on automated specifications and standards development and automated acquisition aids are well integrated with each other and with other OUSD(A&T) CIM initiatives, the PAT recommends the formal chartering of the Acquisition Integration CIM (AICIM) office that is being established in the office of the Principal Deputy Under Secretary of Defense (Acquisition & Technology).

BARRIERS: The barriers to implementing this recommendation are not major, because CIM offices currently exist in the OUSD(A&T). Since CIM organizations are horizontal, and not vertical line organizations, no additional line organizations are required.

MPACT:

PRO:

- Focus scarce automation funding and expertise into those automation efforts which are most able to decrease cycle time and increase quality and availability of specifications and standards for developers and users

- Create a favorable environment for the development, application, and sustainment of automated aids to acquisition community.

CON: None

RISK: The major risk is that the two initiatives (Automated Specifications and Standards Development and Automated Acquisition Aids) recommended by the PAT will not be well ntegrated with each other, or with ongoing OUSD(A&T) CIM initiatives, because they cross unctional area boundaries within OUSD(A&T).

Response: This risk can be reduced by assigning adequate resources and authority to the ICIM office, and/or assigning both initiatives to a single functional proponent.

IPLEMENTATION PLAN:

Task 1: Charter and Organization.

- Establish charters for the Acquisition Process CIM and the Acquisition Integration CIM.

- Determine the internal organizational structure of the new CIM offices.

Responsibility: The Director, Acquisition Program Integration, will have primary responsibility for charter preparation and determining organizational structure. Both charters will be coordinated with the Assistant Secretary of Defense (C3I Acquisition).

Task 2: Implementation. Implement the new CIM organizational structures, secure funding, and recruit personnel. New CIM offices establish points of contact in the office of the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C-I)), the Defense Information Systems Agency (DISA), the Defense Logistics Agency, and the ervices.

Responsibility: The CIM offices have the primary responsibility.

sk 3: New CIM offices execute mission through joint working and steering groups for siness process improvement areas. Joint groups develop process and data models, including is" and "to be" models, identify business process improvement opportunities and interim tegies, identify initiatives to improve business processes, identify alternative approaches to plementing each initiative, select best approach, and implement best approach.

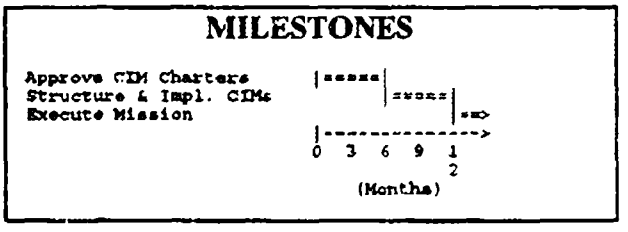
Responsibility: The CIM offices have the primary responsibility.

RESOURCE REQUIREMENTS: Resources for the APCIM should not exceed two percent of the resources used to develop, procure, operate, and maintain the automation systems for which the APCIM is functional proponent. Since the AICIM does not directly manage external automation systems, its resource requirements cannot be expressed as a percentage of the cost of the systems managed. Resources for the AICIM are estimated to be a minimum of 10 in-house people, supported by an annual contract budget of $3M.

METRICS:

1. Percent of acquisition business processes successfully modeled.
2. Percent of completion of acquisition automation projects. Tracked annually by OUSD(A&T).

SCHEDULE: Milestone schedule is as indicated.



Breakout of Mission Areas for DoD Corporate Information Management

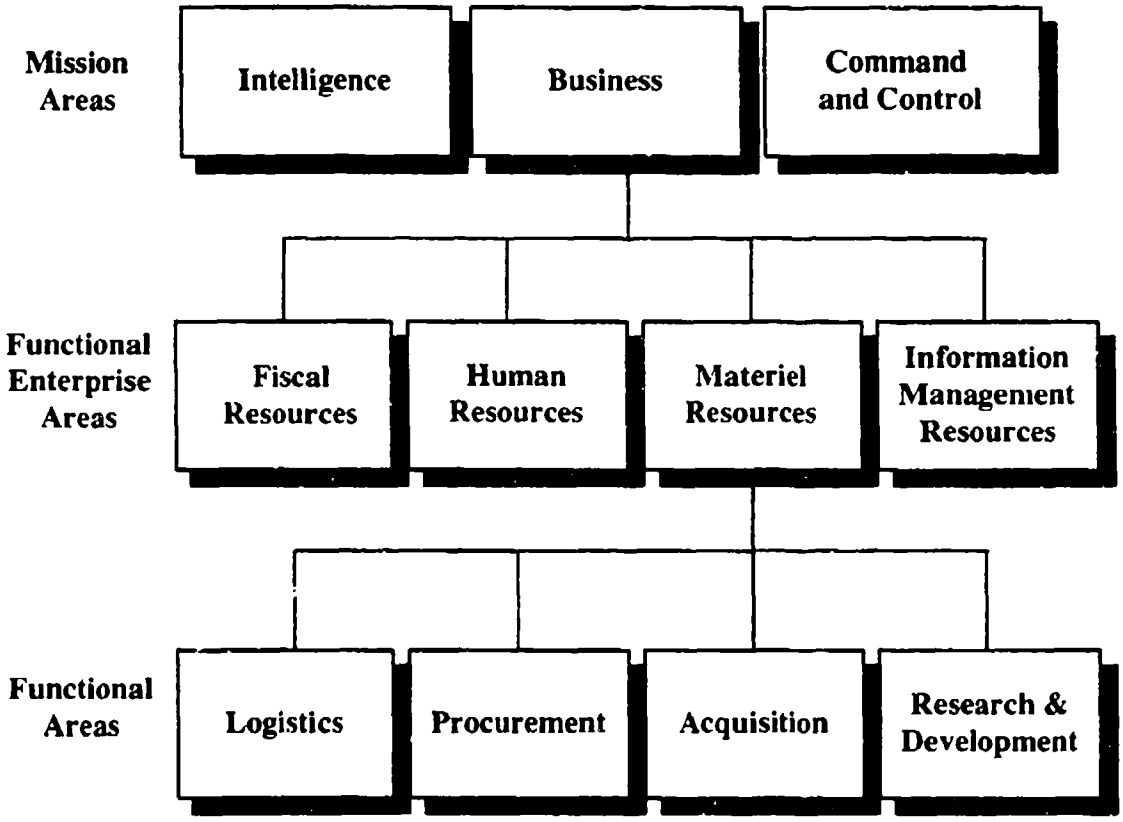


Figure 1

Automated Specifications and Standards Development Aids

RECOMMENDATION: **Direct use of automation to improve the processes associated with the development and application of specifications and standards and Data Item Descriptions (DIDs).**

DISCUSSION: The process by which specifications and standards are currently adopted and developed in DoD is often slow and parochial. The slowness is due, in major part, to two conditions: (1) the current process is dependent on paper mail for coordination of draft military specifications and standards, and (2) the automation tools to create the specifications and standards lack commonality across preparing activities (PAs). The process can be parochial when military specifications and standards are not always well disseminated to and coordinated with industry standards organizations and other DoD PAs. This has resulted in the creation and maintenance of separate, unsynchronized repositories of military and industry standards.

Automation can serve as the means to accelerate the standards development and adoption processes and close the gaps between industry standards and military standards. The keys to implementing this initiative are: (1) providing standard Commercial-Off-The-Shelf (COTS) authoring software, and (2) creating electronic standards and specifications libraries and repositories that would provide access to approved/adopted specifications and standards, DIDs, and draft specifications and standards undergoing development and coordination. These libraries and repositories would reside on multiple servers controlled by cognizant Standards Development Organizations (SDOs) (including DoD), and would be connected through the Internet, which includes the Defense Data Network (DDN). These electronic libraries would be accessible on the desktop workstations of the people who develop and adopt standards (the preparing activities) and the people who apply standards in acquisitions (the using activities). Figure 1 depicts the proposed electronic standards libraries.

The electronic copies of these standards should be downloadable to and processable on the workstations of preparing activities and using activities for purposes of commenting on draft standards, inserting proposed updates into draft standards, tailoring of approved standards, exposing the tiering of references in standards, and ensuring the consistency, currency, and suitability of references in standards. The standards should also be processable on the SDOs' standards servers in a manner controlled by the SDOs. The key to specifications and standards processing and interchangeability is to exploit open systems information technology standards, especially the standards of the Continuous Acquisition and Life-Cycle Support (CALS) family, the DoD Technical Reference Model, and the Internet Engineering Task Force. The keys to specifications and standards searchability are: (1) to exploit a uniform set of directory services (or discovery services) on workstations and library servers, and (2) to exploit international hypertext standards such as HyTime (ISO 10744). There are approximately 11 such discovery services tools now being used in the Internet, and some of these are hypertext oriented.

Currently, DoD is selecting standard COTS authoring software and is creating an electronic library which will contain the specifications and standards referenced by the Department of Defense Index of Standards and Specifications (DoDISS). Many industry standards bodies are also in the process of creating electronic libraries of their standards. Most of these organizations have not made as much progress as DoD. It is in DoD's interest to identify the industry SDOs which are most important and to negotiate agreements with these SDOs to accelerate the implementation of electronic libraries of industry standards. DoD should negotiate with appropriate SDOs to provide DoD users (and possibly other government users) with access to electronic standards libraries on a Department-wide (or perhaps a government-wide) basis. DoD preparing activities and using activities should not have to pay for electronic copies of standards on a per-copy basis; rather, DoD should negotiate for an enterprise-wide license that would allow DoD users to make unlimited copies of electronic standards for internal DoD use.

To prevent duplication of or conflict with private sector automation efforts, it is in DoD's best interests to foster the creation and use of electronic standards libraries as part of a developing national standards automation program to create the National Standards Systems Network (NSSN). The NSSN is currently being developed by the American National Standards Institute's (ANSI's) Standards and Data Services Committee (SDSC). The NSSN is intended to connect the standards information, authoring, and coordination systems of nongovernment and government SDOs and to provide wide access to industry and government users. DoD should continue to work with the SDSC to ensure compatibility with, support the development of, and fully participate in the NSSN.

It is also in DoD's interest to make electronic copies of the unclassified DoDISS specifications and standards available to industry for purposes of soliciting industry comm. on draft DoDISS specifications and standards, soliciting industry comments on DoDISS specifications and standards which are candidates for replacement by industry equivalents, and disseminating DoDISS specifications and standards which have no commercial counterpart.

Automation can also serve as a tool to break down the barriers between the DoD preparing activities and the DoD using activities. Such barriers can arise when the using activity changes the content of a specification or standard cited in a Request for Proposal (RFP), and the change is either not communicated to or not processed by the PA as a proposed change to a specification or standard. Automation can communicate such proposed changes to the appropriate PA and track the disposition of the proposed changes by the PA. The Navy Feedback System, implemented on DoD's Acquisition Streamlining and Standardization Electronic Transfer System (ASSETS), using information obtained from the Acquisition Streamlining and Standardization Information System (ASSIST), is an example of such an automation tool.

Automation can also help solve the problem that arises when nongovernment standards (NGS) referenced in RFPs are not included in the DoDISS. Automated statement of work (SOW) generation tools can identify these standards and queue them for inclusion in DoDISS update transactions.

BARRIERS:

- Funding and personnel resources and sustained management support.
- Reaching agreements with Non-Government Standards (NGS) bodies concerning enterprise-wide licenses to use their standards.

IMPACT: The impact of electronic authoring tools and electronic standards libraries will be:

PRO:

- Increase use of NGS.
- Decrease the number of problem specifications and standards and increase the quality of specifications and standards produced by DoD by increased communication, cooperation, and feedback among the government and NGS communities.
- Increase the feedback between military standards users and military standards preparers through interfaces with the Navy feedback system and with the automatic SOW generation system.
- Increase the number of NGS in the DoDISS by automatically including NGS referenced on SOWs in the DoDISS.
- Decrease the cycle time to prepare, coordinate, and distribute military standards and specifications.
- Decrease the travel costs associated with standards preparation and coordination by decreasing the number of meetings required to produce standards.
- Increase the acceptability of U.S. standards by providing early international exposure of standards through the Internet.
- Provide the military research, development, and acquisition communities with access to draft industry standards on emerging technologies.

Figure 2 depicts the points in the standards development process where this recommendation will make significant improvements in the process.

CON: Implementation delays may be caused by private-sector information resellers.

RISK: The technical risks associated with implementing this recommendation are low, because proven, proliferated Internet protocols can be used to provide interactive terminal services, electronic mail services, and file transfer services to implement this option. Eleven operational directory services tools are available on Internet. Many vendors support document authoring tools that import and export Standard Generalized Markup Language (SGML)-tagged text and graphics in CALS-compatible formats.

IMPLEMENTATION PLAN: DepSecDef issue a policy memorandum directing automation of the standards process. The implementation of this recommendation will be done in concert with ANSI SDSC efforts to create the NSSN. The Deputy Assistant Secretary of Defense for Production Resources (DASD(PR)) will provide both standards expertise and automation expertise to the NSSN program. The implementation plan for this recommendation comprises the following tasks:

Task 1: Standards Development Organization Libraries.

- Identify prioritized list of NGS to be digitized for incorporation into SDOs' electronic libraries.

Responsibility: Deputy Assistant Secretary of Defense (Production Resources)

- Negotiate agreements with the SDOs concerning specifications and standards digitization, CALS-compliant authoring and searching tools, Internet access, and distributed electronics standards libraries.

Responsibility: The Acquisition Process CIM (APCIM) will negotiate agreements with the SDO's. Representatives from the Defense Printing Service, who previously negotiated agreements on DoD printing SDO's specifications and standards, will be part of the negotiation team.

Task 2: . dback System.

- Authorize use of and initiate an evaluation of the Navy Feedback System to determine if it is the "best of breed" candidate to be chosen as an interim DoD Corporate Information Management (CIM) system. Available COTS software should also be included in the evaluation.

Responsibility: The APCIM will be responsible for this task upon approval by the Under Secretary of Defense (Acquisition & Technology).

- Upgrade Feedback System to accommodate results of initial user testing to provide access to full-text DoD standards and specifications and interface to automatic SOW generation system.

Responsibility: The APCIM with implementation by a Central Design Activity (CDA).

Task 3: ASSIST Upgrades. Upgrade ASSIST to provide an acquisition database capable of establishing specifications and standards baseline for individual procurements and to provide a commercial equivalency module for all existing NGS documents.

Responsibility: The APCIM with implementation by a CDA.

Task 4: DoD Specifications and Standards Library. Upgrade Navy Publishing on Demand System Enhanced (NPODS(E)) with CALS-compliant authoring tools, standards consistency checking tools, hypertext searching tools, and Internet access.

Responsibility: The Defense Printing Service will have primary responsibility.

Task 5: Specifications and Standards Conversion/Validation. Convert existing DoD specifications and standards to CALS-compliant text and graphic formats; validate the converted specifications and standards.

Responsibility: Defense Printing Service and Preparing Activities.

Task 6: Policy Memorandum. Prepare policy memorandum directing automation of the specifications and standards process, (Draft Policy Memorandum is attached).

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

RESOURCE REQUIREMENTS:

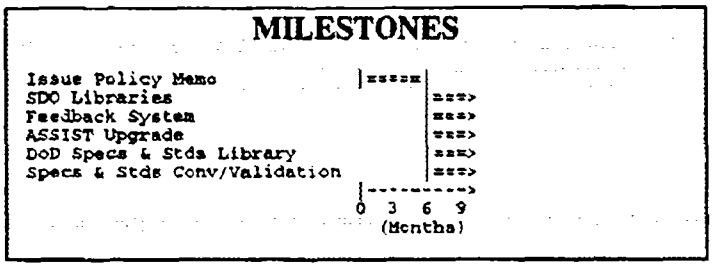
Cost Estimate ($ in millions)

Item	Fund Type	FY94	FY95	FY96	FY97	FY98	FY99	Total
1. SDO	Proc.	4.0	4.0	4.0	4.0	3.0	2.0	21.0
Libraries	O & M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Feedback	Proc. O	0.2	0.3	0.3	0.3	0.2	0.1	1.4
System	& M	0.1	0.5	0.6	0.6	0.6	0.6	3.0
3. ASSIST	Proc.	0.3	0.5	0.3	0.6	0.2	0.2	2.1
Upgrades	O & M	0.5	1.6	2.0	0.9	1.0	1.0	7.0
4. DoD Doc.	Proc.	0.5	0.7	1.2	0.6	0.2	0.2	3.4
Library	O & M	0.1	0.3	0.6	0.7	0.9	0.9	3.5
5. Doc.	Proc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Conv./Val.	O & M	2.6	4.3	1.0	0.0	0.0	0.0	7.9
Total	Proc.	5.0	5.5	5.8	5.5	3.6	2.5	27.9
	O & M	3.3	6.7	4.2	2.2	2.5	2.5	21.4

METRICS: The Acquisition Process CIM (APCIM) office will measure the effectiveness and implementation of the automation effort.

- Decrease in time to develop, coordinate, revise and/or approve specifications and standards.
- Number of industry libraries electronically accessible to DoD users.
- Annual "Report Card" from user community.

SCHEDULE: Milestone Schedule is as indicated. Specific completion dates will be developed by APCIM.



Proposed Electronic Libraries

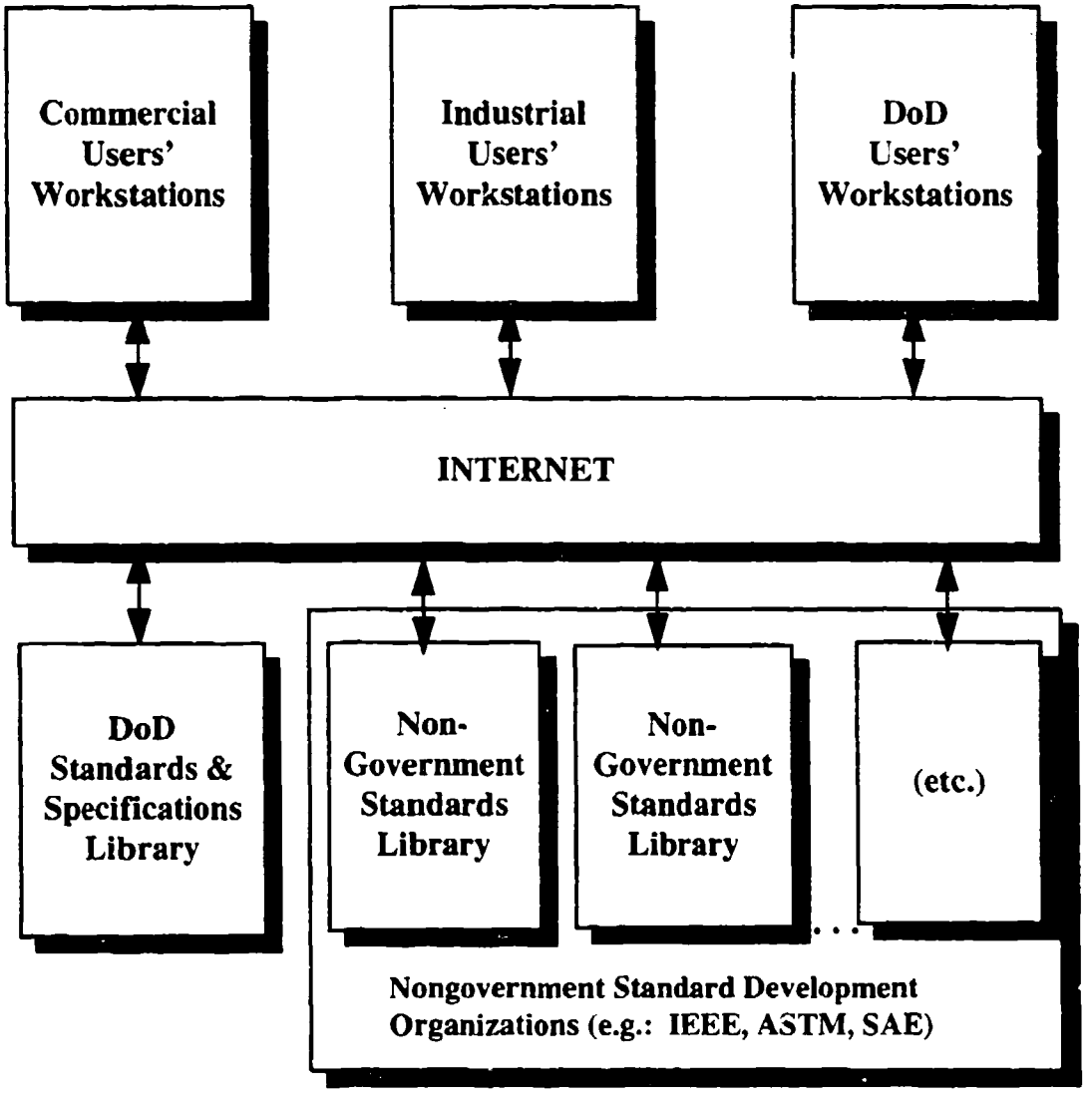


Figure 1

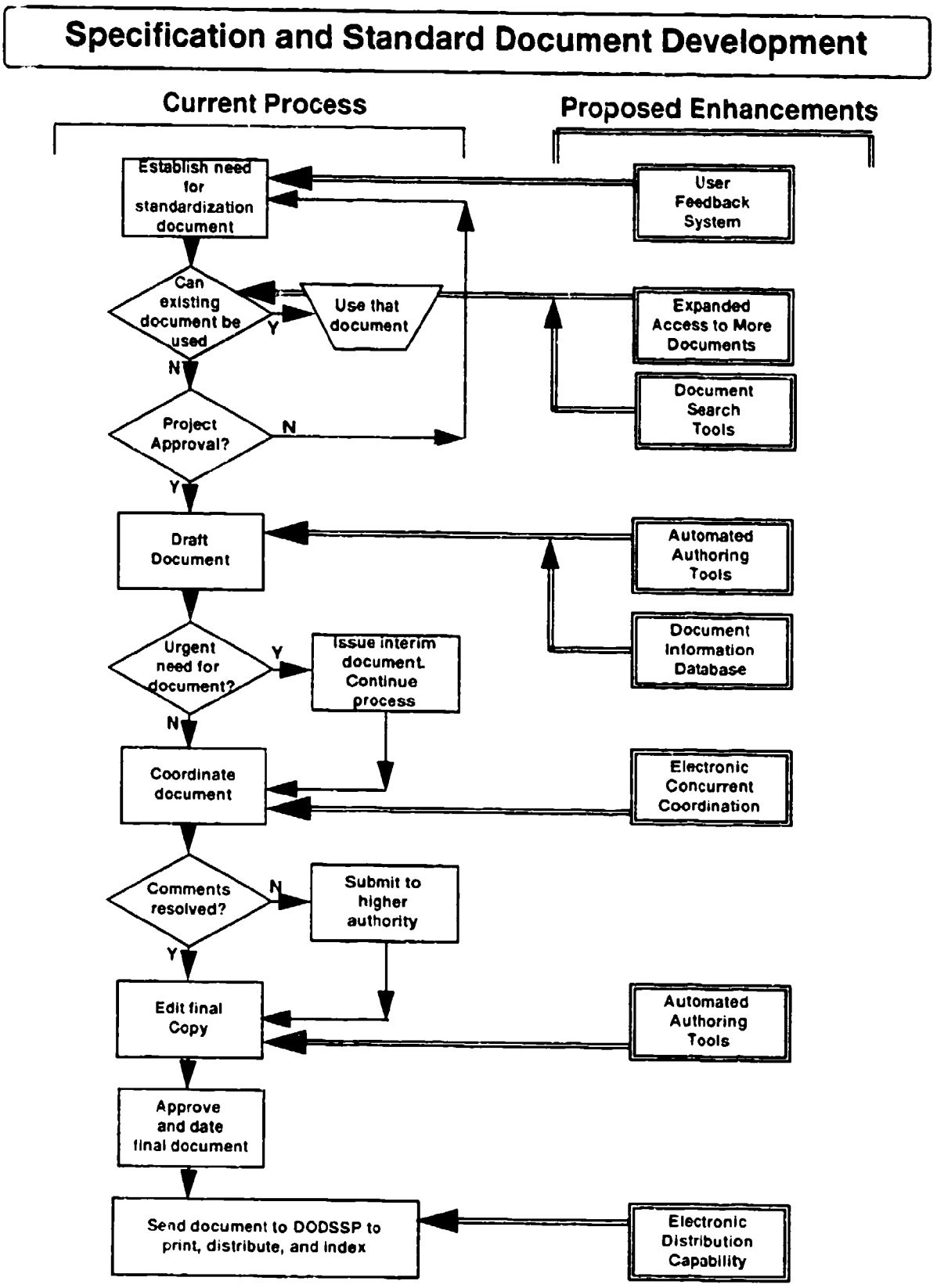

Specification and Standard Document Development
Current Process
Proposed Enhancements
Establish need for standardization document
User Feedback System
Can existing document be used
Y
Use that document
Expanded Access to More Documents
N
Document Search Tools
Project Approval?
N
Y
Draft Document
Automated Authoring Tools
Document Information Database
Urgent need for document?
Y
Issue interim document. Continue process
N
Coordinate document
Electronic Concurrent Coordination
Comments resolved?
N
Submit to higher authority
Y
Edit final Copy
Automated Authoring Tools
Approve and date final document
Send document to DODSSP to print, distribute, and index
Electronic Distribution Capability

Figure 2

DRAFT MEMORANDUM

MEMORANDUM FOR Secretaries of the Military Departments
Chairman of the Joint Chiefs of Staff
Under Secretaries of Defense
Assistant Secretaries of Defense
Comptroller
General Counsel
Inspector General
Assistants to the Secretary of Defense
Director of Administration and Management
Directors of the Defense Agencies

SUBJECT: Automation Support for the Department of Defense Acquisition Process

1. I have established an Acquisition Process Corporate Information Management (APCIM) office to manage the application of automation systems to the Department's acquisition process. As part of its mission, the APCIM office will coordinate the Department's role in military and industry standards automation efforts, identify and procure acquisition automation systems and data for Department of Defense (DoD) wide use, and eliminate redundant DoD acquisition automation efforts.

2. I request that you support the mission and functions of the APCIM office in accordance with my memorandum of 13 October, 1993, Subject: Accelerated Implementation of Migration Systems, Data Standards, and Process Improvement.

Signature

ATTACHMENT

Automated Acquisition Aids

RECOMMENDATION: **Direct the application of automated aids in acquisition.**

DISCUSSION: Because the work activities surrounding the creation, maintenance, and use of standards and specifications are primarily technical in nature, and because the technical user community has traditionally operated locally rather than globally, the nature of existing automated aids to support business activities in support of standards and specifications is mostly localized and limited in scope. With a few exceptions, existing aids both in the private and public sectors have been locally authored with limited distribution.

The explosion of the variety and capability of available standardized commercial hardware and software, coupled with rapid developments in computing techniques and standardized telecommunications, has advanced the state of the art such that the only obstacles to the provision of improved automated aids to the business processes associated with standards and specifications are resources and focused national management support.

The primary focus of such aids is to improve the processes by which DoD conducts acquisition business in support of acquisition reforms. Specifically, these aids will help integrate the commercial and defense sectors into a national industrial base, help remove barriers that prevent the full use of commercial markets, help produce the highest quality solicitations, reduce unnecessary requirements, and help select the highest quality, best value contractors. Equally important is the provision of aids to dramatically improve business productivity for the technical user at the desktop level. Application of such aids should proceed on a coordinated DoD-wide basis to remedy the problems associated with the local, limited-use aids available today.

These aids should support three broad areas which currently require enhanced automated assistance: improved use of standards and specifications in acquisition processes such as Statement of Work (SOW) preparation; improved access to and inclusion of commercial standards and specifications and product data; and the provision of simulation, modeling, and reverse-engineering tools to assist in reducing the need for military specifications and enhancing concurrent engineering practices.

BARRIERS: There are four barriers to provision of these tools and automated aids: time, funding, training, and management focus. It will require about five years to fully implement and field the aids which will result from these recommendations, although significant productivity improvements can be realized within two years.

IMPACT:

PRO:

- The SOW generation tools will provide DoD users with higher quality acquisition and solicitation documents at greatly reduced resource costs by translating requirements

stated in user terms into complete, accurate coordinated SOWs, containing references to industry, federal, and military standards and specifications. These tools can: (1) reduce time associated with preparation, coordination, and distribution of SOWs, (2) reduce unwarranted or untailored standards and specifications in SOWs, and (3) accumulate statistics about military, federal, and industry standards and specifications cited in contracts.

- Automated technical point of contact tracking for specifications and standards will enable SOW preparation activities and other users to direct questions and issues directly to the responsible individuals. Commercial product data and certified supplier lists in electronic form will facilitate rapid market research on quality commercial solutions to military requirements. Commercial-Off-The-Shelf (COTS) software configuration management on a DoD-wide basis will reduce the proliferation of limited-use software and promote the proliferation of interoperable, portable, standardized engineering software for all DoD users. Figure 1 shows the existing and proposed Request for Proposal (RFP) production processes.

CON: None.

RISK: The risk associated with implementing this recommendation is moderate because it may be difficult to reach agreement on a reduced standard subset of COTS software.

IMPLEMENTATION PLAN:

Task 1: Supplier Lists. Establish and maintain electronic files of certified suppliers.

Responsibility: The Acquisition Process CIM (APCIM) office will designate one of the Services to have primary responsibility.

Task 2: Standard COTS Engineering Software.

- Survey and consolidate state-of-the-art concurrent and reverse engineering automated aids used by government and industry. Establish and control a configuration-managed list of standardized automated COTS software tools for use in DoD engineering and acquisition activities.

Responsibility: The APCIM office will forward this task to the existing Director, Defense Research and Engineering (DDR&E) inter-Service COTS software work group for implementation.

- Follow the standards of the Continuous Acquisition and Life-cycle Support (CALS) architecture, the DoD Technical Reference Model, and the Internet Engineering Task Force to ensure interoperability of automated systems and portability of software and data.

Responsibility: The APCIM office will designate one of the Services to have primary responsibility.

Task 3: Commercial Product Availability. Use existing machine-readable information on product availability, e.g., Non-Developmental Items (NDIs) and the Thomas Register, to provide access to commercial sources.

Responsibility. The APCIM office will designate one of the Services to have primary responsibility.

Task 4: SOW Expert System. Provide automated expert system aids to procuring activities. These aids can provide major limits on the use of military standards and specifications by limiting tiering, supporting tailoring, and by automated preference for commercial standards and specifications.

Responsibility: The APCIM office with implementation by a Central Design Activity (CDA).

Task 5: POC Tracking Tools. Expand Standardization Directory 1 (SD-1) database to provide tracking mechanisms for technical points of contact for individual standards and specifications.

Responsibility: The APCIM office with implementation by a CDA.

Task 6: PDES/STEP Support. Encourage and increase support to the timely maturation of standards being worked by nongovernment standards bodies to facilitate the next generation of engineering data (i.e., Initial Graphics Exchange Specification (IGES), Standard for Exchange of Product Model Data (STEP), and Product Data Exchange Using STEP (PDES)).

Responsibility: The APCIM Office will have primary responsibility.

RESOURCE REQUIREMENTS:

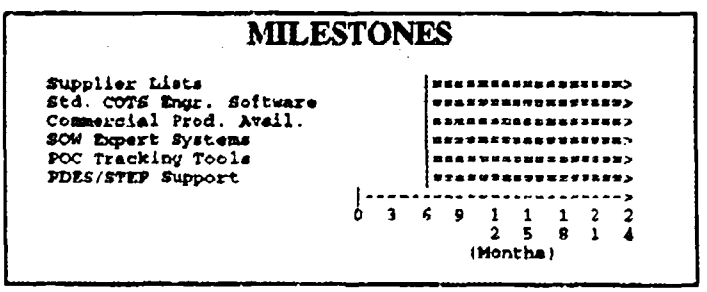
Cost Estimate by Item by FY ($ in millions)

Item	Fund Type	FY94	FY95	FY96	FY97	FY98	FY99	Total
1. Supplier Lists	Proc. O & M	0.3 0.1	0.3 0.4	0.4 0.6	0.3 0.7	0.3 0.7	0.3 0.7	1.9 3.2
2. Std. COTS Engr. S/W	Proc. O & M	0.4 0.1	0.6 0.5	0.7 0.8	0.5 0.9	0.4 1.0	0.3 1.0	2.9 4.3
3. Comml. Prod. Avail.	Proc. O & M	0.1 0.1	0.3 0.5	0.5 0.6	0.3 0.6	0.2 0.6	0.1 0.6	1.5 4.0
4. SOW Expert Sys	Proc. O & M	0.2 0.1	0.9 0.3	1.4 0.6	0.8 0.7	0.4 0.8	0.3 0.8	4.0 3.3
5. POC Tracking Tools	Proc. O & M	0.1 0.1	0.2 0.3	0.3 0.4	0.2 0.4	0.2 0.4	0.1 0.4	1.1 2.0
6. PDES/STEP Spt.	Proc. O & M	0.5 0.0	0.5 0.0	0.5 0.0	0.5 0.0	0.5 0.0	0.5 0.0	3.0 0.0
TOTAL	Proc. O & M	1.6 0.5	2.8 3.0	3.8 3.0	2.6 3.3	2.0 3.5	1.6 3.5	14.4 16.8

METRICS: The Acquisition Process CIM (APCIM) office will measure the effectiveness and implementation of the automation effort.

- Number of NGS's instantly available to DoD users.
- Percent of items represented and maintained in standard digital form.
- Number of supplier lists available.

SCHEDULE: Milestone schedule is as indicated. Specific completion dates will be developed by APCIM.



RFP & SOW Preparation

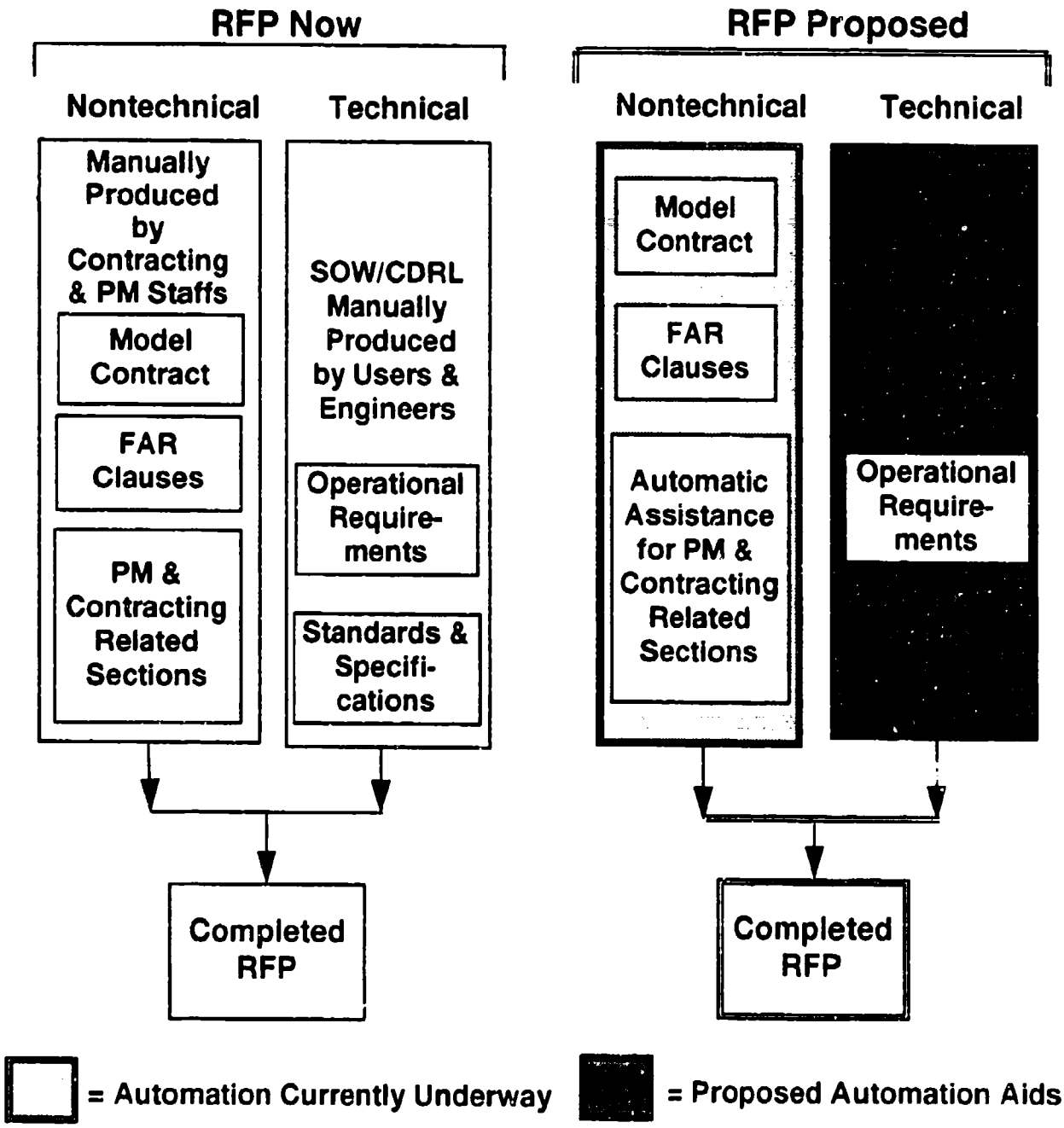


Figure 1

Challenge Acquisition Requirements

RECOMMENDATION: Use Distributed Interactive Simulations (DIS), Design to Cost (DTC), and Cooperative Research and Development Agreements (CRADAs) to achieve aggressive cost/performance trade-offs and dual use capabilities.

DISCUSSION: In the development and acquisition of weapons systems there are several problems associated with the translation of requirements into performance-based specifications, the development of hardware and software to meet the user's needs at acceptable levels of performance and cost, and the availability of acceptance criteria before Engineering and Manufacturing Development (EMD) begins. Requirements have typically been generated by "user-pull" (a vulnerability that cannot be eliminated by changes in tactics or strategy and that requires new equipment) or by "technology push" (pushing the performance envelope as far as possible, although it may presently meet the known threat and exceed the known requirements of the user). Either of these can lead to development and procurement of a system whose costs far exceed its defense value.

In many instances, the performance estimates for the system are reasonably accurate. However, other areas such as cost and schedule aren't equally reliable by the time the system is ultimately produced and fielded. Distributed Interactive Simulation (DIS) has emerged as a new tool which can merge cost, schedule, and performance criteria in a simulation environment. DIS provides the capability to analyze many uncertainties. Requirements, manufacturing and testing technology and capabilities, costs, and effectiveness can be addressed early in the requirements development process before there is any commitment to specific hardware design. In addition, industry has databases which are accessible on Internet to link into these analyses. It provides an effective means to:

- Support an orderly process for requirements generation based on effective use of simulation outputs.
- Evaluate the effectiveness of potential solutions to identified user needs.
- Rationalize the number of units which are required to provide force effectiveness for the user.
- Prioritize specific performance requirements and operational envelopes which must be provided to minimize "gold-plating."
- Include analysis of available marketplace systems and solutions which meet the stated needs, and evaluate the impact on operational effectiveness in any areas where such systems are deficient, but could be modified with technology insertion.
- Optimize production facilities and capabilities for a range of production rates for the system, including both prime contractors and subcontractors.

- Consider the impact of both DoD and Foreign Military Sales (FMS) within the production rate analyses, including trade-offs within available production facilities and capabilities.

To reinforce their ability to address such questions early in the requirements and development process, the Army has established Battle Laboratories, which realistically replicate field conditions and the characteristics of proposed systems in a real-time simulation environment.

It should also be possible to materially reduce the overall development cycle. Unlike prior experience where the cycle could become so extended that the threat and our military requirements change materially during development, much shorter cycles will quickly put systems in the hands of the users. An example of this is the GBU-28 "bunker buster" Guided Bomb used during Desert Storm to attack deeply buried and fortified command positions. The total cycle, utilizing both industry and Government development centers and arsenals, required just 21 days from requirements definition to use.

In a manner analogous to the dual-use production concept, the Services are entering into cooperative Research and Development (R&D) agreements (CRADAs) with commercial corporations covering a broad range of technologies, and would assist in expanding the DIS base. These cooperative agreements can lead to dual-use products and processes which identify R&D activities being undertaken by either party to the agreement, and which might be of interest or benefit to the other. Such a path enhances the use of modular technology development and insertion, and could be readily available to both commercial and DoD parties.

The DoD has had a Design-to-Cost program requirement in place since 1973, but studies have shown that the DTC effort is often used for cost tracking rather than for cost control. The effort, which initially focused on production costs because they were easier to estimate, has been extended to the costs of supporting the system in the operational environment and its entire Life Cycle Cost (LCC). In addition, the program has usually been implemented during EMD, when 80 to 90 percent of the system's LCC has already been bounded. This cost prediction effort must be pushed back to the earliest phases of the system, during the requirements development and Demonstration/Validation (Dem/Val) phases.

Such an approach has been used in recent years for both the Army's RAH-66 Comanche program and the T800 engines which power it. While it might be claimed that the system is a brand new item, nearly all of the processes used in building it and the support systems used to sustain it in the field exist today, and the costs associated with these modules can be identified and estimated with relative confidence. There remains only the integration of the pieces to bound the costs prior to initiation of EMD. In concert with the Battle Lab simulation and realistic estimates of production rates and quantities, the technology tools, modeling, and simulation exist today to more accurately quantify the performance and cost impacts of potential trade-offs within the emerging system requirements.

BARRIERS: The major barrier is cultural and procedural. The tools identified above all have their counterparts in the commercial marketplace today, where they are used extensively before a product is developed or produced. Implementation of change requires a recognition

of the issues cited and implementation of needed changes. The exception may be the equivalent within the other services of the Army's Battle Laboratories.

IMPACTS:

PRO:

- Simulation and modeling are consistent with the way that leading companies are implementing these processes.
- Cost/performance benefits and liabilities will be more clearly defined and supportable prior to initiation of a system development or fielding.
- Future costs for procurement and support of proposed systems can be more clearly defined prior to ratification of requirements.
- Impacts of potential trade-offs can be more clearly defined in terms of both cost and technical performance, while potential NDI solutions can be evaluated as a part of the same process.
- A real opportunity exists to materially shorten the development and acquisition cycle through firm definition of requirements for both the developer and the system operator.

CON:

- Will be resisted by defense personnel who are not comfortable with the capabilities of simulation efforts, or who feel that prioritization of requirements to achieve a balanced solution sacrifices some desired (but not essential) technical performance.
- Hesitation on the part of both industry and Government personnel to freely enter into cooperative R&D agreements where either party feels that some degree of proprietary competitive edge may be compromised.
- A perception that such an aggressive up-front assessment may impact the schedule for the overall development process, even though industry studies have shown that the additional time used up front is recovered several fold during the actual development process.
- The validity of simulations and models must be established through proper study and analyses.

RISK: A perception that there is a risk of providing products that do not meet all of the user's needs - a step back from the concept of technical excellence at all costs. This risk should be mitigated by the increased capability to define, simulate, and quantify the real capabilities of the proposed systems before any major commitment to development or production is made.

IMPLEMENTATION PLAN:

Task 1: State a preference for use of DIS and modeling to provide a synthetic real-time environment for assessment of combat effectiveness in an integrated force environment, and to support critical assessment on the cost-effectiveness of proposed solutions. Revise DoDI 5000.2 as follows:

- Insert as para 2c to Part 4 of Section B, "Evolutionary Requirements Definition" (relabel existing paragraphs 2c through 2f as 2d through 2g respectively):

  "c. The examination of battlefield dynamics versus current and new technology capabilities shall be assessed through interactive simulation and modeling to the maximum extent practical. Any new capability shall be balanced against Design to Cost (see part 6 section K) to achieve optimum life cycle cost/performance benefits before any new requirement is proposed."

- Add para 2b(5) to Part 4, Section B, "Evolutionary Requirements Definition":

  "(5) The Statement will be reviewed regularly throughout the development cycle using simulation and modeling techniques to maintain assurance that cost and performance are affordable and achievable."

- Insert as para 2b to Part 6, Section A, "Systems Engineering" (relabel existing paragraphs 2b and 2c as 2c and 2d respectively):

  "b. If justified by a cost/benefit analysis, the manufacturing processes, the system, and the system's performance should be modeled and refined prior to start of production build."

- Add to para 2b of Part 6 Section K "Design to Cost":

  "b. Life Cycle Cost shall be modeled in conjunction with the battlefield dynamics simulation prior to issuance of the Statement of Need and refined throughout the development program."

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

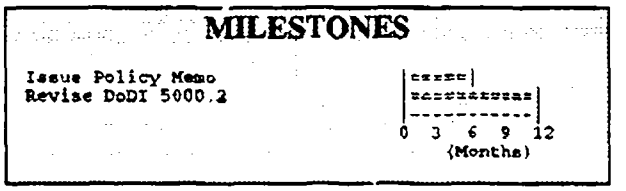
Task 2: DepSecDef issues policy memorandum encouraging use of CRADAs with industry to expand simulation databases and nodes and to foster dual-use industrial base opportunities.

Responsibility: Office of primary responsibility to prepare and staff policy memorandum is the office of the Director, Defense Research and Engineering. (Draft Memorandum is attached.)

RESOURCES REQUIRED: No additional resources are required. Efforts should be integrated within ongoing service activities in these areas.

METRICS: Percentage of contracts over $5M using simulation and modeling to achieve cost/performance trade-offs. Data will be tracked by the Service Standards Improvement Executive.

SCHEDULE: Milestone schedule is as indicated. Part of the effort is the review of ongoing contracts for opportunities to delete unneeded requirements.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Cooperative Research and Development Agreements (CRADAs)

1. The DoD must accelerate the transition to greater use of commercial production processes and capabilities to help offset the eroding share of the industrial base supporting military procurement and the continuing decline in available military resources. Greater leverage in achieving this goal can be realized during formulation of military requirements through a more aggressive market research and a better understanding of the cost-performance of available technologies and the capabilities of industry to capitalize on these technologies.

2. CRADAs can be an important tool in promoting cooperative processes between military requirements builders and private sector systems developers. Extending the envelope of the CRADA to include dual-use technology consideration, Distributed Interactive Simulation (DIS) and life cycle cost influences can be helpful. Ready exchange of new ideas to enhance both military and commercial end products is essential.

3. Each Service is directed to offer unique initiatives on how CRADAs can be used, or expanded, to benefit requirements generation. The initiatives should concentrate on military systems requirements formulation emphasizing the balance of cost, performance, affordability, and dual-use opportunities.

Signature Block

ATTACHMENT

Pollution Prevention

RECOMMENDATION: Direct the establishment and execution of an aggressive program to eliminate, or reduce and identify the quantities of toxic pollutants procured or generated through the use of specifications and standards.

DISCUSSION: Procurements introduce an unregistered quantity of toxic pollutants into production and DoD inventory. The recommendation focuses on specifications and standards to:

- Eliminate toxic pollutants that are not essential.
- Reduce quantities and hazard of those pollutants required.
- Identify those pollutants, by individual specifications and standards, still required for executing the DoD mission.

The purpose of this recommendation is to further DoD leadership for environmental security and to reduce the life cycle cost of tracking the procurement, use, release, and disposal of toxic pollutants. This is accomplished by establishing a coordinated, continuing process to implement Executive Order (EO) 12856 of 3 August 1993. The resulting objective is cost-effective, timely procurements that are environmentally sound.

Emphasizing source reduction of toxic pollutants, the EO requires a 50 percent reduction in the release of toxic pollutants between calendar year 1994 and 1999, consistent with the safety and reliability requirements of the DoD mission. The goal and constraints must be respected in implementing this recommendation.

The family of toxic pollutants includes:

- The toxic chemicals named pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) as of 1 December 1993 (currently lists 312 chemicals).
- Other extremely hazardous substances identified in DoD's Agency Pollution Prevention Strategy created pursuant to the EO, perhaps including hazardous wastes defined in 40 CFR 261.

There are several problems related to the environmental impact of specifications and standards:

- The EO requires a level of effort that is comprehensive and therefore much greater than the ad hoc responses to date to meet environmental requirements. The implementation plan incorporates the successful aspects of these efforts as it recognizes all

standardization functions, prices each, and then integrates all elements into an overall strategy.

- Responsibility for eliminating toxic pollutants from specifications and standards has been unclear. The implementation plan identifies those responsibilities belonging to their preparers.

- Nongovernment standards (NGS) and government specifications and standards have been written or adopted without required consideration of environmental implications. The implementation plan provides a process for ensuring that pollution prevention is an integral, continuing part of the standards program.

- Most solutions to environmental issues have been prescriptive and have required reporting and data collection. The implementation plan encourages performance specifications, and the recommendation minimizes data collection and reporting for contractors and DoD components.

- Current uncontrolled requirements for toxic pollutants in military documents expose users to unanticipated risks. Implementing this recommendation reduces the use of toxic pollutants to the minimum required by the DoD mission and provides notice of remaining requirements for toxic pollutants.

Transcending the environmental compliance problems that can be addressed through changes in specifications and standards are other issues related to reducing the quantities of toxic pollutants actually entering into DoD control:

- Part 6, Section I of DoDI 5000.2, "System, Health Hazards and Environmental Impact," and MIL-STD-882, "System Safety Program Requirements," are too generalized to be useful for tracking the entry of specific toxic pollutants. A commercially accepted alternative, the Aerospace Industries Association's NAS411, "Hazardous Materials Management Program," should be adopted for mandatory DoD use.

- OSHA 1910.1200 (29CFR) and the Material Safety Data Sheets created in response to it are sufficient for their public health purposes, but insufficient for the toxic pollutant reporting now required of DoD and other federal agencies.

- Promising systems of tracking toxic pollutants, such as the shipboard Hazardous Inventory Control Plan of the Department of Navy, must be evaluated for DoD-wide application.

- Potential tracking systems for the use, storage, and disposal of toxic pollutants, once they are identified, await Corporate Information Management approval.

BARRIERS: Lack of communication among research functions, procurement, standards, and pollution prevention managers hampers corrective action. Communication from DoD leadership must require integration and cooperation. Solutions must take advantage of the automation capabilities called for in this report. Searches for alternatives to toxic pollutants,

sponsored by the specifications and standards community, must be priority projects for research and development, and then funded in the research and development cycle.

The General Services Administration must cooperate with the review, assessment, and revision of federal specifications and standards. The standards developing organizations must cooperate with the review and revision of nongovernment standards.

Preparing activities view special purpose reviews and corrections as an interruption to the normal specifications and standards maintenance priorities, especially in an environment of diminishing resources. Pollution prevention must become an integral, continuing part of the Defense standards processes.

DoDI 5000.2, Part 6, Section I, and MIL-STD-882 are barriers to using commercial practices for collecting data on toxic pollutants. Substituting AIA Standard NAS 411 is a potential improvement.

IMPACT:

PRO:

- Satisfies the requirements of Executive Order and environmental laws.
- Increases sources of supply, by reducing suppliers' potential liability from conforming to specifications and standards with toxic pollutants.
- Contributes to the quality of specifications and standards.
- Makes NGS and performance specifications acceptable with respect to environmental requirements.
- Creates the input data for tracking and reduces the cost of tracking and disposal of toxic pollutants.
- Fosters coordination between acquisition and standards personnel with respect to environmental issues.

CON:

- Implementing assessments and corrections required by the EO may require extraordinary resources.

Response: The costs are mandated. The implementation plan calls for leadership to secure the required funding. The long-term cost avoidance will be an offset to the initial costs.

RISK:

- Substitutions for toxic pollutants may reduce performance or have unforeseen, negative ramifications. Application of the recommendation must be consistent with safety and reliability requirements of the DoD mission.

- Substitutions may increase first-time cost. Application of the recommendation must be based on reasonable life-cycle cost considerations. Life-cycle costs will normally be reduced.

- Substitutions may have disparate impact on small businesses. Prime contractors should be encouraged to share solutions with their supplier base.

- Controlling toxic pollutants may foster prescriptive requirements and avoidance of NGS. DoD personnel must be educated to apply the recommendation correctly.

- Tracking toxic pollutants may foster unnecessary data collection.

IMPLEMENTATION PLAN:

Task 1. Leadership tasks:

- Appoint a continuing Toxic Pollutant Panel, chaired by the Deputy Under Secretary of Defense (Environmental Security), DUSD(ES), and including the Assistant Secretaries and Deputy Under Secretaries necessary to ensure integrated leadership for reducing toxic pollutants. (Draft Memorandum is attached.)

Responsibility: Office of primary responsibility for staff action is Deputy Under Secretary of Defense (Environmental Security).

- Integrate the environmental leadership related to acquisition efforts and defense standards.

- Charter and successfully implement the recommendations of a process action team with respect to reducing toxic pollutants in procurement and to tracking the use, storage, and disposal of toxic pollutants which enter the control of DoD. The charter should require:

  - Assessment of current status and need for improvement in government and industry.
  - Study of promising approaches.
  - Recommended methods for reducing procurement of toxic pollutants by 50 percent.
  - Recommended methods for collecting data on toxic pollutants entering DoD control.
  - Recommended methods of transfer of the data to the environmental tracking system.
  - Recommended methods for routine feedback of the data to the preparers of specifications and standards.
  - Recommended training program and automation actions.

Responsibility: The Toxic Pollutant Panel established in Task 1 will be responsible for this program.

- Direct the Deputy Under Secretary of Defense (Environmental Security) to identify and ensure funding for the implementation efforts of this recommendation, assigned through the Departmental/Agency Standards Improvement Executives. Research, development, and engineering efforts should continue to be funded through established channels.

Responsibility: The Toxic Pollutant Panel will be responsible for staff work. The Under Secretary of Defense (Acquisition & Technology) will sign the directive to the Deputy Under Secretary of Defense (Environmental Security).

Task 2: Specification and Standards Assessment Activities

- Obtains from the Environmental Protection Agency an integrated list of substances meeting the current definition of toxic chemicals as contained in paragraph 2-206 of EO 12856.

  - Group toxic pollutants into priority groupings according to the urgency of control; include key words for identifying each toxic pollutant.

Responsibility: The Toxic Pollutant Panel will be responsible for all staff actions.

- Sponsor the development of guidance and direction for minimizing use of toxic pollutants in government specifications and standards. These will be incorporated into DoD 4120.3M, MIL-STD-490, 961 and 962 by the preparing activities.

- Sponsor a search of the DoDISS, producing a list of toxic pollutants related to each specification and standard, sorted by preparing activity and priority group.

Responsibility: The office of primary responsibility for these tasks is the OASD(PR) Standardization Program Division.

- With policy direction from DASD (PR), assess the specifications and standards potentially related to toxic pollutants, reviewing for:

  - Required use, when the specification or standard is for procurement of a toxic pollutant or when a toxic pollutant is necessary to manufacture or maintain the procured item.
  - Optional use, when a choice in the specification or standard can create a required use of a toxic pollutant.
  - Possible use, when a contractor's likely response to a requirement or option would result in the furnishing, manufacturing use, or maintenance use of a toxic pollutant.

- Revises (or request the Standards Developing Organization responsible for the specification or standard to correct) the specifications and standards with respect to

eliminating or identifying and reducing the remaining toxic pollutants. Solutions, in order of preference:

Cancellation of the specification or standard or option in the specification or standard that requires a toxic pollutant.
- Conversion to a performance specification with a performance requirement for minimizing toxic materials.
- Substitution of a nontoxic or less toxic alternative.
- No change, if prudent alternatives are not available and the specification is essential; register research and development need, in accordance with OMB A-106.

- List in the specification or standard or adoption notice the toxic pollutants that are required optional, or possible, concurrently with the specification or standard assessment if the revisions will be protracted. Also record the priority groupings for which the specification or standard has been assessed. The normal procedure should be to perform the assessment and revision of the specifications and standards simultaneously and investigate for all toxic pollutants simultaneously.

Responsibility: Specific actions will be prepared by the Toxic Pollutant Panel and assigned through the Service/Agency Standards Improvement Offices to the preparing activity or adopting activity for each specification or standard.

RESOURCE REQUIREMENTS:

YR	1	2	3	4	5
FUNDS	$1.6M	21.1M	16.5M	16.5M	16.5M
PEOPLE	*	N/A	N/A	N/A	N/A
WK Yrs	5 *	200	140	140	140

* Tasks scheduled for the first year will be accomplished by internal allotment of resources.

The work years listed are additive to the normal defense specifications and standards efforts and assume implementation of the other recommendations of the report, including performance-based specifications and conversion to nongovernment standards. Funds for the pollutant effort have been requested through environmental channels. (Note: See Chapter Eleven, Resources, for estimating procedures.)

Costs are offset with:

- Lower cost acquisitions due to life-cycle savings in tracking toxic pollutants and disposing of hazardous waste.

- Reduced costs due to entry of commercial suppliers.

- Reduced cost from eliminating liability created because of the use of toxic pollutants.

METRICS:

- Measure the correction of the specifications and standards (but not the degree of change) by the data field being established in DoDISS to record the lowest priority grouping of toxic pollutants for which the specification or standard has been corrected.

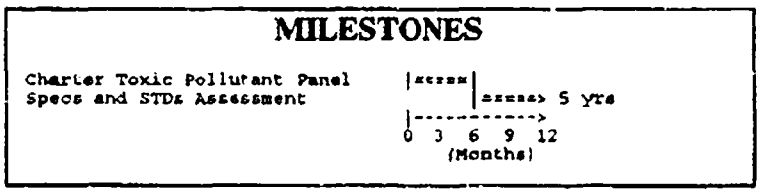
- Measure the success at eliminating toxic pollutants in the specifications and standards with feedback from DoD contractors.

- Measure the success at eliminating toxic pollutants with the reporting mechanisms now being implemented in response to the EPCRA.

The Toxic Pollutant Panel will develop trend charts to measure and depict this data. The charts will be presented to the Defense Standards Improvement Council (DSIC) annually. The first progress report will be presented to the DSIC six months after establishment of the Toxic Pollutant Panel.

SCHEDULE: Milestone schedule is as indicated. This schedule anticipates a year to organize the process and review each specification and standard for potential pollutants, a second year to repair specifications and standards suspected of harboring the most urgent toxic pollutants, and three years to complete corrections of specifications and standards identified with successive priorities.

MILESTONES



DRAFT MEMORANDUM

MEMORANDUM FOR Under Secretary of Defense of Environmental Security

SUBJECT: Establishment of a Toxic Pollutant Panel

1. I would like you to establish and chair a Toxic Pollutant Panel to provide leadership and direction for the Department of Defense's efforts to reduce toxic pollutants.

2. Please provide me a Charter for this group within 30 days. I would like membership to be at the Assistant Secretaries and Deputy Under Secretaries level.

Signature Block

ATTACHMENT

Chapter Seven

The Education Imperative

New acquisition strategies require new skills and new tools, and hence new training and education programs to implement cultural change. Without exception, past reports on acquisition reform have identified training and education of the acquisition work force, both government and industry, as a "make-or-break" recommendation. The only solution to the overapplication and improper application of specifications and standards is an educated, informed user and preparer. The objective should be the development of a versatile workforce with cross-functional and interdisciplinary backgrounds and orientations. The PAT recommends that DoD institute continuous and systemic education of the professional acquisition work force to provide the training and tools to meet the new acquisition objectives.

Summary of Recommendations and Implementation Agenda

Recommendation: Direct revision of the training and education programs to incorporate specifications and standards reform. Contractor participation in this training and education effort shall be invited and encouraged.

- DepSecDef provides direction to USD(A&T) to revise training and education programs to incorporate specifications and standards reform measures.

- Develop a "Road Show" approach to train/educate the acquisition workforce on the integration of new and existing policies and procedures resulting from acquisition reform initiatives.

- Institute changes in career progression training requirements from entry through executive levels to include NDI, procurement, market research, activity-based costing and management, acquisition streamlining, integrated product development, performance-based specifications, incentive contracting, quality assurance, and specifications/standards applications and development. These are to be incorporated as a mandatory part of career progression for all appropriate personnel.

- Expand delivery systems for acquisition training/education to include satellite transmissions, correspondence courses, computer-based instruction, on-site presentations, and arrangements with local universities.

Specifications and Standards Reform Training

RECOMMENDATION: Direct revision of the training and education programs to incorporate specifications and standards reform. Contractor participation in this training effort shall be invited and encouraged.

DISCUSSION: The Center for Strategic and International Studies (CSIS) Milspec Reform Report recommended that the "Deputy Under Secretary of Defense for Acquisition Reform require that courses on NDI procurement, market research, acquisition streamlining, performance-based specifications, and requirements development be incorporated as a mandatory part of the career series for all appropriate acquisition personnel[4]." Without exception, past reports on acquisition reform have identified training and education of the acquisition workforce, both government and industry, in the use and preparation of specifications and standards as a major recommendation, i.e., the solution to the misapplication and misinterpretation of specifications and standards is an educated, informed document user and preparer. The objective of the education process should be the development of a versatile workforce with cross-functional and interdisciplinary backgrounds and orientations. Focus needs to be placed on the incorporation of the "best value" philosophy into all phases of acquisition training, from entry through executive levels. Studies have shown that 30 to 40 percent of the cost of procuring a weapons system is the management and control (overhead) imposed by the government.[5] Training programs which enforce the cultural change can help minimize this overhead cost and improve the effectiveness of the Defense Standards Program. As Dr. Perry stated, "It is not because we have incompetent people in the defense acquisition systems. They are faithfully carrying out a system. We must find a way of improving the system."[6]

BARRIERS: Resources, both personnel and funding, must be dedicated to this expanded training and education effort. Changing and re-directing career training programs will require the revision of current training courses and the development of new courses that must encompass all levels of training from entry through the executive level. This means more personnel must be devoted to the various Service and DoD schools for an increased instructor workload and funding to support revising course curriculums, developing new courses, and expanding delivery systems (satellite and computer-based-instruction).

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[4] Road Map for MilSpec Reform - Integrating Commercial and Military Manufacturing," Report of the Working Group on Military Specifications and Standards, The Center for Strategic and International Studies, 1993.

[5] Dr. Perry quoting a Defense Science Board study, 16 Jun 93

[6] Dr. Perry on military procurement before House Subcommittee on Military Acquisition Defense Acquisition, 21 Jun 93

IMPACT: The development of innovative, risk-managing versus risk-adverse leaders and managers to fulfill the country's defense acquisition needs in an environment of cultural change and diminishing resources.

PRO:

- Satisfies the competency needs of specifications and standards users and developers. Move toward "best value" acquisitions, preference for commercial standards and business practices, the use of performance/function descriptions versus "how to," etc.

CON:

- Funds and personnel will have to be diverted from other areas to support this refocused training requirement. The competition for these scarce resources becomes greater as the Defense budget draws down.

RISKS: Past studies recommendations implementation failed due to lack of training. Without expanded systemic career progression training, the cultural change will not become institutionalized. High quality course content may be sacrificed to minimize the cost and time of revising current courses and developing new courses.

IMPLEMENTATION PLAN: Continuous, systemic training improves the acquisition process by institutionalizing the cultural change. As the cultural change takes hold, the acquisition process will improve and commercial practices will become more common, saving scarce acquisition resources and expanding the industrial base. The training can not be a one-shot approach, but must be continuous to ensure that the cultural change becomes the routine way of doing business. Without it, momentum for change dissipates, reinforcing the status quo.

TASK 1: DepSecDef provides direction to Under Secretary of Defense (Acquisition & Technology) to revise training and education programs to incorporate specifications and standards reform measures.

Responsibility: The office of primary responsibility for this action is the Director, Acquisition Education, Training and Career Development.

Task 2: Develop a "Road Show" approach to train/educate the acquisition work force on the integration of new and existing policies and procedures, resulting from acquisition reform initiatives. This is essentially a train-the-trainer approach with top levels of management in each Service and Agency "training" their Acquisition Commands (ACQCOMS), who in turn train their activities. The actual training is conducted on site at the activities by a cadre of trained Service and Agency acquisition personnel, thus minimizing travel and per diem costs. The first phase, Road Show I, will be top acquisition officials from the Services, Agencies and ACQCOMS traveling to the activities to "break the status quo mindset" with a one-day session. The second phase, Road Show II, will be the trained ACQCOM cadre taking a three to four day "how to" course to their field activities.

Responsibility: Each Service and Agency is responsible for development of their unique two-phase Road Show content, based on guidance from the Under Secretary of Defense (Acquisition & Technology).

Schedule: Within two months of acceptance, the Deputy Under Secretary of Defense (Acquisition Reform) will meet with the Services and Agencies and provide guidance on the new acquisition philosophy, policies, procedures. Within three months of that meeting, each Service/Agency will begin conducting Road Show I, to be completed within a two-month period. The Services/Agencies should begin the train-the-trainer program for their ACQCOMS immediately following the completion of Road Show I. Within five months the trained cadre of the ACQCOMs should be ready to begin Road Show II. Road Show II is on-site training at the ACQCOMs' major installations and should be completed within a six-month period. Road shows will continue each year for refresher training and to indoctrinate new employees.

Task 3: Institute changes in career progression from entry through executive levels. This will include revising current courses on NDI procurement, market research, activity-based costing and management, acquisition streamlining, integrated product development, performance-based specifications, incentive contracting, quality assurance, and specifications/-standards applications and development. This training will become a mandatory part of career progression for all appropriate acquisition personnel (revisions to current courses and development of new courses, as required), including development of refresher training for all acquisition personnel in critical positions who have completed their mandatory training. The acquisition reform courses will carry a pass/fail provision so students receive credit only if they pass the course. In addition, all acquisition courses, whether revised, new, or unchanged, will have a uniform end-of-course critique to determine if students are satisfied with the course content. There will be a 12-month follow-up critique to determine if students believe the course content helped them in accomplishing their jobs. The Road Show program and DoD/Service school courses also need to be available to contractors, on a space available basis. The course proponent/sponsor will be responsible for inviting industry participation in these training efforts. An announcement in the Federal Register may encourage industry involvement.

Responsibility: The Under Secretary of Defense (Acquisition & Technology) will (1) direct the DAWIA career management functional boards to develop the necessary specifications and standards reform competencies in the career progression of the acquisition workforce; (2) prioritize the Defense Acquisition University's (DAU) efforts to revise current courses, develop new courses, and develop refresher training in accordance with the competencies from the DoD career management functional boards, and (3) request the functional boards; Services and Agencies to provide members, for training review panel.

Schedule: Deputy Under Secretary of Defense (Acquisition Reform) initiates several tasks. First, task the DAU and the Services as they revise and incorporate new sessions into existing acquisition courses and/or develop new courses to cover the specifications and standards reform competencies furnished by the DAWIA career management functional boards. Revisions should be incorporated within 4 months of tasking and new courses developed within eight months of tasking. Instruct the career functional boards that these competencies would be mandatory for career progression. DAU should have the refresher training

developed for acquisition professionals by the beginning of FY 95. Every revised and new course will be identified as an "Acquisition Reform Course."

Task 4: Expand delivery systems for specifications and standards training and education. The traditional "formal classroom" cannot meet the training needs of the acquisition work-force. Delivery systems for courses should include satellite transmission, correspondence courses, computer-based instruction using interactive technologies, and on-site presentations.

Responsibility: The DUSD(AR) through DAU, shall help the DoD/Service schools to expand their delivery systems for courses.

Schedule: New delivery systems should be ready within 12 months of tasking.

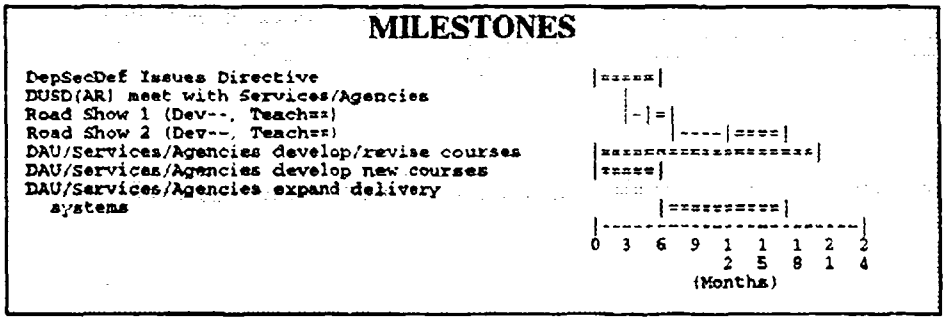
RESOURCE REQUIREMENTS: Required resources are shown below. Training at DAU and desktop training (including upgrading computer systems) will be accomplished within existing budgets as a normal cost of doing business.

Cost Estimate ($ millions)

	94	95	96	97	98	99	Total
Satellite Training							
Course Development	.8						.8
Transmission	.2	.5	.5	.5	.5	.5	2.7
Road Show							
Course Development, Instruction & Travel	2.0	2.0	.5	.5	.5	.5	6.0
Commercial Alternatives to Military Specifications	1.0	1.0	.4	.4	.4	.4	3.6
Total	4.0	3.5	1.4	1.4	1.4	.4	13.1

METRICS: All major acquisition commands have participated in Road Show I and II within 18 months of acceptance of recommendation. Revisions for current courses are completed within four months of tasking, new courses are developed within eight months of tasking, the four refresher courses are ready for presentation at the beginning of FY 95, revised career progression requirements are published by the functional boards within 12 months of tasking, and new delivery systems are operational 12 months from tasking. Eighteen to 24 months after initial tasks, there should be evidence that the cultural change is taking place, i.e., commercial practices are increasing in the acquisition process and overhead costs are being reduced.

SCHEDULE: Milestone schedule is as indicated.



Chapter Eight

Instituting Cultural Change

Ironically, many of the tools needed to minimize the use of uniquely military specifications and standards already exist in a variety of DoD directives. defense regulations, and acquisition handbooks. For example:

- DoD Directive 5000.2 directs acquisition personnel to consider NDI and commercial items in preference to new military developmental items.

- Defense Acquisition Regulations require industry participation when key decisions are made regarding specifications and standards.

- The military handbook on Acquisition Streamlining states: "Use a zero-based approach to ensure that all specifications earn their way into the technical procurement package based on need and justified by the performance requirements."

The problem is not that no one has ever tried to change the specifications and standards system. Rather, it is that the implementation plans were flawed in several key ways. First, they did not institute direct and ongoing interface between DoD specifications and standards management and Service acquisition personnel to reinforce the reform message. The policy hierarchy simply issued a new mandate and assumed that the bureaucracy would and could carry it forward.

Second, Standardization Executives (renamed Standards Improvement Executives in this report) were not empowered with the authority or resources to implement the specifications and standards reform program. As before, this initiative will not succeed without the establishment of clear lines of management control over specifications and standards missions, funding, and manpower. Responsibilities for specifications and standards are today assigned to random locations within the DoD organization. The most likely candidate to carry forward a reform agenda--the Standards Improvement Executive--is often removed from the acquisition decision-making process. There has been no systematic effort to centrally manage the program. Local commands often make critical decisions on military standards without the benefit of a DoD corporate or Service strategic plan. For the reform program to succeed, Standards Improvement Executives must have the authority (already established in DoD 4120.3M) and control of the funds necessary to implement all aspects of the initiative. There must be a line item in the budget that establishes their control of resources, and those funds must be adequate to support the work required to adopt nongovernment standards, convert military specifications and standards to performance-based, integrate automated information and communication capabilities, and the other key requisites to successful implementation detailed in this report.

The PAT proposes to remedy these past deficiencies in four ways. It recommends that:

• The recognition of the need to overhaul the specifications and standards system should be embodied in DoD policy.

• OSD management and other acquisition leaders must take an ongoing and proactive role in reinforcing the acquisition reform message, of which military specifications and standards are only one component.

• Standards Improvement Executives must be given the proper management authority and control of resource allocation to implement the policy goals. A draft charter for Standards Improvement Executives is included.

• Institute continuous education of the professional acquisition workforce through career training from entry to executive levels.

Summary of Recommendations and Implementation Agenda

Recommendation: Senior DoD management take a major role in establishing the environment essential for acquisition reform and cultural change.

• Issue a DoD policy implementing the Standards Program Improvement Recommendations in support of the Defense Acquisition Reform Initiatives.

• Demonstrate senior leadership commitment to Acquisition Reform Initiatives by highly visible participation in the implementation process.

• The Defense Standards Improvement Council and the Standards Improvement Executive will oversee the execution and implementation of this report.

• Issue a change in policy that incentivizes Program Managers to select alternative solutions to military specifications and standards.

Recommendation: Formalize the responsibility and authority of the Standards Improvement Executives, provide the authority and resources necessary to implement the standards improvement program within their Service/Agency, and assign a senior official with specifications and standards oversight and policy authority.

• Require each Service Acquisition Executive to appoint a Standards Improvement Executive who will have access and accountability to the Service Acquisition Executive; be an advisor to the Service Acquisition Executive in the acquisition review process; and have sufficient authority and resources to achieve DoD corporate specifications and standards reform goals. OSD and DLA will appoint a Standards Improvement Executive with comparable responsibility. The Standards Improvement Executive will be independent of the Competition Advocate.

• Implement an annual review of the Specifications and Standards Program. The reviews will address progress against the Standardization Program Plans, use of commercial standards, status and plans for standards management resources, and the contributions of standards management to acquisition reform.

• Make the Defense Standards Improvement Council a leadership forum for commercial-military integration, implementing specifications and standards reform, resolving issues between the Services, activating and tracking Standardization Program Plans, tracking metrics, and serving as the specifications and standards focal point for DoD corporate leadership.

Role of Senior Leadership

RECOMMENDATION: **Senior DoD management take a major role in establishing the environment essential for acquisition reform cultural change.**

DISCUSSION: Deming management theory states that cultural change must start from the top, requires support at all levels of the organization, and requires time to accomplish. Positive actions by DepSecDef and USD(A&T) (senior DoD Management) directly involving the Service/Agency AEs, PEOs, and PMs are essential to begin the cultural change necessary for acquisition reform. Because the current environment of rules, regulations, directives, instructions, specifications, and standards evolved to minimize program risk it created a highly risk-adverse culture. The acquisition reform initiative will strip away the acquisition process administrative, and oversight "boiler plate" and must include changing the risk-adverse culture to one of risk identification and management.

A major change in the acquisition culture places high levels of stress on those involved. This is a long-term effort that requires a positive management environment to succeed. While it is a senior management prerogative to initiate cultural change, it is also a senior management responsibility to ensure that the necessary environment exists to successfully implement such a change. This environment must be established by DepSecDef and USD(A&T) directly with the AEs, PEOs, and PMs. This environment must be continually reinforced at this management level to ensure that all upper acquisition management adopts the change as part of the new acquisition culture.

As we evolve from traditional military business practices to a more commercial style, we will impose additional risk on the program manager. Accordingly, we must also establish an incentive program that encourages program managers to manage risk rather than avoid risk. Failure to do so may result in innovative proposals being rejected as "a risk not worth taking" when funds are already appropriated for the military specification solution.

BARRIERS: There are four major barriers to implementing this recommendation:

- The first is to convince Executive Leadership of the importance of Defense Standardization and the critical impact of the Standards Program Improvement Recommendations on the success of the Acquisition Reform Initiative.

- The second is a long-term senior leadership commitment, since major cultural changes take years to accomplish and consistent reinforcement to establish.

- The third barrier is the time required for senior leadership involvement. People at the DepSecDef, USD(A&T), AE, PEO, and PM level find that time is their scarcest resource and ration it according to their perception of each activity's priority.

- The fourth barrier is the current acquisition culture paradigm of a fully regulated, tightly controlled, completely defined acquisition environment. The acquisition workforce may have a hard time adjusting to a freer, more open business type environment with its demands for more personal responsibility, accountability, and personal career risk.

IMPACT:

PRO:

- Demonstrates top Executive Leadership support.
- Projects strong, involved Senior Leadership role.
- Effects Senior Service/Agency acquisition leadership "buy-in" to acquisition reform initiatives.

CON:

- Requires time investment by senior leadership with time-constrained schedules.
- Identifies acquisition workforce career risk without providing incentives for acceptance of this risk.

RISK: There are two related areas of risk:

- Workforce perception of the actions by DoD, Service, and Agency Senior Leadership indicate indifference to the acquisition reform initiatives implementation.
- Workforce perception of the actions by DoD, Service and Agency Senior Leadership are negative and in conflict with the intent of the recommendations, i.e., we continue to "shoot the messenger" and relieve acquisition workforce employees who take legitimate, managed risks that fail.

IMPLEMENTATION PLAN: The establishment of the environment essential for changing the acquisition culture will depend on demonstrated Senior DoD Leadership commitment to implementing the Acquisition Reform Initiatives, and on Service/Agency Senior Acquisition Leadership "Buy-In" on Acquisition Reform Initiative implementation.

Task 1: DoD Policy. DepSecDef issue policy directing the Services and Agencies to implement this report "Blueprint for Change" in support of the Defense Acquisition Reform Initiatives. (See Attachment 1.)

Responsibility: The office of primary responsibility to prepare and staff the policy statement is the Deputy Under Secretary of Defense (Acquisition Reform) (DUSD(AR). OSD implementing resources should be temporarily assigned to DUSD(AR) and the Defense Standards Improvement Council should report to DUSD(AR) until the entire process is underway.

Schedule: DUSD(AR) to have the policy memorandum completed and forwarded within x months after approval of this recommendation.

Task 2: Leadership Participation. Demonstration of Senior DoD Leadership commitment to implementing the Acquisition Reform Initiatives including specifications and standards by acceptance of the PAT report and highly visible participation in the implementation process. The use of periodic Acquisition Reform Initiative video briefs and video conferences given by DepSecDef or Under Secretary of Defense (Acquisition & Technology) (USD(A&T)) with all Service/Agency AEs, PEOs, acquisition commands, and DRPMs participating, demonstrates this visibility and participation. The video conference format is a presentation followed by questions and answers. Length and frequency of video conferences are driven by the need to dispense information and establish the credibility of Senior DoD Leadership's commitment. Potential subjects are Cultural Change, Risk Taking, Accountability, and Responsibility/Authority as well as the individual reform initiatives. Include acquisition reform messages in public speeches and media interviews. Video tapes of the briefs, video conferences, speeches, interviews, etc., are then made available for use in training.

Responsibility: DUSD(AR) arranges for development and production of the video briefs and their distribution. DUSD(AR) coordinates the video conference schedule with the Service/Agency AEs. DepSecDef, USD(A&T), and DUSD(AR) select the initial video conference subjects. OSD, Service, and Agency staffs support DUSD(AR) in preparation of background material and development of the video conference text and presentations. Producers provide copies of video tapes to DAU for use by course developers and by DAU schools.

Schedule: See Milestone Chart, Leadership Participation.

Task 3: Defense Standards Improvement Council (DSIC). The Standards Improvement Executives, with involvement, concurrence and endorsement of the Service Acquisition Executives, will oversee the execution/implementation of the recommendations in this report in accordance with approval/direction from the Deputy Secretary of Defense. The DSIC will provide direction, serve as the principal integration forum, resolve issues, provide feedback to the DUSD(AR), and monitor progress.

Responsibility: The Under Secretary of Defense (Acquisition & Technology) will issue a directive to the Defense Standards Improvement Council. The office of primary responsibility for preparing and staffing the directive is the DASD(PR) Standardization Program Division (See Attachment 1).

Task 4: Issue a change in policy that incentivizes Program Managers to select alternative solutions to military specifications and standards. (See attachment 2).

Responsibility: Office of primary responsibility to prepare and staff this change is the Principal Deputy Under Secretary of Defense (Acquisition & Technology).

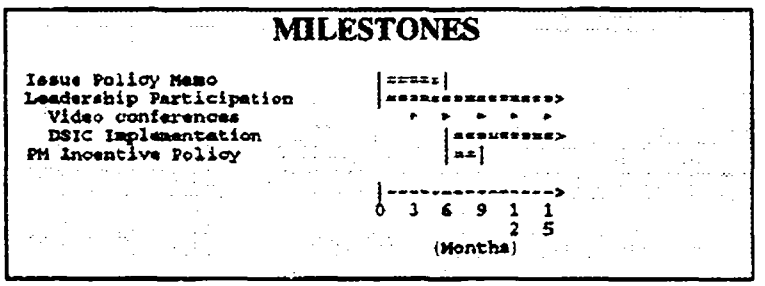
RESOURCE REQUIREMENTS:

- No additional resources are required.

METRICS

- Task 1
  - -- Is the policy memorandum issued?
- Task 2
  - -- Is the PAT report approved for implementation?
  - -- Do the video conferences occur?
  - -- If they occur are they continued?
  - -- Do the Services/Agencies implement the recommendations in the PAT report?
- Task 3
  - -- Progress reports from the DSIC.
- Task 4
  - -- Is the policy memorandum issued?

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Under Secretary of Defense (Acquisition & Technology)
Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Implementation of the Report, "Blueprint for Change"

The report, "Blueprint for Change," is approved for implementation. I am asking the Defense Standards Improvement Council to assume complete responsibility for executing the recommendations provided in the report.

Please provide me a list of the principal personnel that will be involved in planning and executing this assignment including the Standards Improvement Executives and personnel from the Service/Agency Standards Improvement Offices. I expect your list to reflect personnel who will be dedicated to this effort.

Signature Block

ATTACHMENT 1

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Acquisition Reform Program Incentives

1. As we evolve from traditional military business practices to a more commercial style, we will impose additional risk on the program manager. Accordingly, we must also adopt an incentive program that encourages the evaluation of alternatives by the Program Manager. Failure to do so will increase the risk of rejection of innovative contractor proposals, as risks not worth taking, when funds are already appropriated for the military specification solution.

2. Accordingly, when the solicitation permits alternatives to military specifications and standards in the offeror's response, program offices will evaluate alternative solutions. For those alternative solutions which are selected, the program office shall retain a portion of the savings, which are the result of the alternative solution. Use of the funds is limited to the intent of the appropriation and the obligation constraints associated with the type of funds.

Signature Block

ATTACHMENT 2

Standards Improvement Executives

RECOMMENDATION: Formalize the responsibility and authority of the Standards Improvement Executives, provide the authority and resources necessary to implement the standards improvement program within their Service/Agency, and assign a senior official with specifications and standards oversight and policy authority.

DISCUSSION: The responsibilities for military specifications and standards are randomly assigned within the DoD Services and Agencies. There is no common approach to the authority, responsibility, or scope of assignment. The position of the Standards Improvement Executive (currently titled Standardization Executive) is often placed in the organization structure removed from the acquisition decision process.

DoD and Service/Agency leadership is critical to the success of the Specifications and Standards Program. While there are examples of innovative leadership, such as the Army's emphasis on performance specifications and the Air Force's use of guide specifications, there is little DoD-wide focus in this area.

Neither DoD leadership nor the Services and Agencies view the Specifications and Standards Program as a critical part of their mission. Specifications and standards is considered a paperwork exercise, disassociated from the "real" work of the program manager or technical expert. In reality, specifications and standards represent the distillation of acquisition expertise and are the mechanism for flowing this knowledge into the acquisition process.

Resources are critical. For the DoD Specifications and Standards Program to succeed, Standards Improvement Executives must have the authority, the mission, and the resources necessary to implement required initiatives. For Standards Improvement Executives to succeed within the DoD, they must be responsible for a budget line item that establishes the funds necessary to fund standards organizations, support participation in nongovernment standards bodies, implement and maintain automation, and perform the tasks essential to the Specifications and Standards Program. Several Navy acquisition activities have eliminated funding for standardization as a result of the drawdown, and this is only the beginning. If current resource trends continue, the DoD standardization capabilities will be disestablished and the current problems will be greatly compounded.

All policies and directives must be specific and their results measurable. The resultant metrics must be reviewed on a regular basis at the highest levels of the DoD leadership. Unless the highest levels of the DoD require regular reports from Service and Agency acquisition leaders who allocate resources and establish priorities, reform initiatives will not be supported by the necessary changes in the DoD Specifications and Standards Program.

OSD must initiate a leadership plan that energizes all levels of the DoD. All levels of the Department, from the DepSecDef, through the local commanders, to the technical expert developing or maintaining a document, must understand that the Specifications and Standards

Program is critical to maintain a world-class military force supported by a viable Defense Acquisition process. The Standards Improvement Executive must be directly involved in the Acquisition process to ensure standards policies are addressed and the acquisition reforms associated with standardization are implemented.

BARRIERS:

- The DoD leadership has historically failed to demonstrate long-term commitment to the Specifications and Standards Program.

- Strengthening standards leadership will remove responsibilities from other organizations. Also, to many people within the DoD, a specific specification or standard, or family of specifications and standards, is their tool for the implementation of their respective discipline. Both these technical specialists and those organizations losing responsibility will use every opportunity to undermine the implementation of a strong leadership organization which could reduce their influence.

- Resources are at a premium in the downsized DoD.

IMPACT:

PRO:

- Strong standards leadership will implement the acquisition reform initiatives related to standardization, and foster a culture change for performance-based requirements and teaming of the military and commercial industrial bases.

- A strong, technically competent Standards Improvement Executive will provide critical support to Program Managers and Program Executive Officers in their acquisition review process.

CON:

- Recommendation will create another power base within the DoD leadership.

- Resources are required for training, automation, travel to participate in the development and revision of nongovernment standards, etc. These resources will be obtained from budgets already reduced to a critical level.

Response: Acquisition reform is essential for the economic acquisition of weapon systems. Specifications and standards reform is an essential part of acquisition reform and strong standards leadership is mandatory for the Specifications and Standards Program to succeed.

RISK:

- Inadequate resources to execute the mission.

- Organizational turf battles.

IMPLEMENTATION PLAN:

Task 1: Standards Improvement Executive. Require each Service Acquisition Executive to appoint a Standards Improvement Executive who will have access and accountability to the Service Acquisition Executive; advise the Service Acquisition Executive in the acquisition review process; and have sufficient authority and resources to achieve DoD corporate military specifications and standards reform goals, including making determination of functional equivalency of commercial practices; and implement DoD 4120.3-M, "DoD Standardization Policies and Procedures." OSD and DLA will appoint a Standards Improvement Executive with comparable responsibility. The Standards Improvement Executive will be independent of the Competition Advocate and will be authorized redelegation on a case-by-case basis. A sample Standards Improvement Executive charter is attached. (See Attachment 1.)

Responsibility: The DASD(PR) Standardization Program Division is the office of primary responsibility for initiating this action.

Schedule: Requirement and Charter forwarded by USD(A&T) to the Services and DLA one month after report is approved. Names and locations of Standards Improvement Executives forwarded to USD(A&T) two months after tasking received. Draft letter is attached. (See Attachment 2.)

Task 2: Acquisition Review Process. The Standards Improvement Executives will advise the SAE in their Service/Agency acquisition review processes in support of the Program Managers and Program Executive Officers to ensure that military specifications and standards and performance-based requirements are properly addressed. As part of that review process, the Standards Improvement Executive shall be guided by the attached acquisition improvement principles for reviewing requests for proposal (see Attachment 3). The Standards Improvement Executives and the positions within the Military Departments' Standards Improvement Offices will be designated critical acquisition positions and shall be Level III certified in accordance with the Defense Acquisition Workforce Improvement Act.

Responsibility: The Departmental/Agency Acquisition Executives will be responsible for assigning this task to the appropriate Service/Agency office.

Schedule: Implemented by requirements letter described above.

Task 3: Standards Reviews. Implement an annual review of the Specifications and Standards Program. Each Service and Agency will be represented by either the Service/Agency Acquisition Executive or the Standards Improvement Executive. The reviews will address progress against the Standardization Program Plans, use of commercial standards, status and plans for standards management resources, and the contributions of standards management to acquisition reform.

Responsibility: The Service/Agency Standards Improvement Executives will present the report to the Service Acquisition Executives and Under Secretary of Defense (Acquisition & Technology).

Schedule: Annually, as part of National Standardization Week.

Task 4: Command Standards Improvement Offices. A senior level executive will be assigned at each Acquisition Command within the Services and Agencies to promote standards improvement initiatives within the Command, assist the Standards Improvement Executive in achieving the reform goals, and participate in the local acquisition review process. The Standards Improvement Executives will delegate specific responsibilities and authority to the Command Standards Improvement Offices.

Responsibility: Service/Agency Standards Improvement Executives.

Schedule: Tasking provided to Acquisition Commands one month after assignment of Standards Improvement Executives. Responses provided to Standards Improvement Executive two months after tasking received.

Task 5: Budget Line Items. Direct Deputy Assistant Secretary of Defense (Production Resources) to develop a joint standards budget with individual Service/Agency line items based upon requirements justified by each Service/Agency. The Standards Improvement Executives will control the resources necessary for the implementation of the specifications and standards programs within their respective Services and Agencies. The DASD for Production Resources will only control separate resources (funds and personnel) necessary to implement DoD-wide specifications and standards initiatives.

Responsibility: The Service/Agency Standards Improvement Executive will be responsible for submitting budget request and for program executive.

Schedule: Tasking provided to Standards Improvement Executives one month after assignment. Standards Improvement Executives provide draft Program Elements and Program Management Directives to Under Secretary of Defense (Acquisition & Technology) six months after tasking.

Task 6: Defense Standards Improvement Council (DSIC). Make the DoD Standards Improvement Council a leadership forum for integration of the military and commercial industrial bases, implementing specifications and standards reforms, resolving issues between the Services, activating and tracking standardization program plans, tracking metrics and milestones, and serving as a specifications and standards focal point. The DSIC will report progress to the DUSD(AR) until the process is underway.

Responsibility: The office of primary responsibility is the DASD(PR) Standardization Program Division.

Schedule: Quarterly Defense Standards Improvement Council meetings begin one month after Standards Improvement Executives are assigned.

METRICS: The Standards Improvement Executives shall be responsible for tracking implementation of all acquisition reform issues related to specifications and standards.

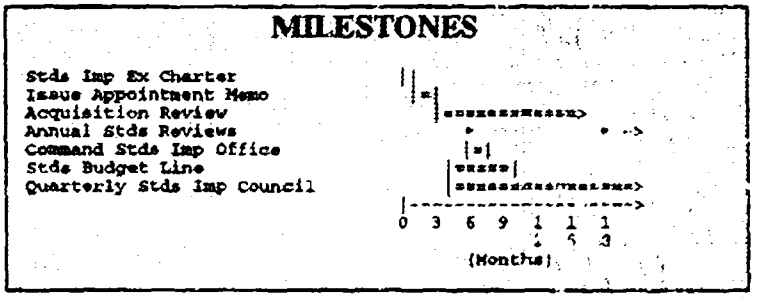
RESOURCES: Based on past Navy studies and current document distribution, funding requirements on a continuing basis are:

Cost Estimate ($ millions)

	Required						
Service/ Agency	FY94	FY95	FY96	FY97	FY98	FY99	Total
Army	19.0	18.0	17.1	16.2	15.4	14.6	100.3
Air Force	7.0	6.6	6.3	6.0	5.7	5.4	37.0
Navy	17.9	17.0	16.1	15.3	14.5	13.8	94.6
DLA	4.0	3.8	3.6	3.4	3.2	3.0	21.0
OSD	3.0	2.8	2.7	2.6	2.4	2.3	15.8
Total	50.9	48.2	45.8	43.5	41.2	39.1	268.7

These allocations should be reviewed annually and adjusted for inflation, document cancellation and transfer, and any specifications and standards initiatives.

SCHEDULE: Milestone schedule is as indicated.



Sample Charter for Standards Improvement Executive

The Standards Improvement Executives shall:

a. Serve on the Defense Standards Improvement Council.

b. Establish a Service/Agency Standards Improvement Office to manage and direct the implementation of Defense Standards Program policies and procedures. The office will report at the Command Level.

c. Implement Defense Standards Program policies and procedures as defined in DoD 4120.3-M.

d. Serve as the Service/Agency focal point and advisor for implementation of acquisition initiatives related to specifications and standards.

e. Develop and implement, in conjunction with Deputy Assistant Secretary of Defense (Production Resources), a Service/Agency standards improvement plan which implements both the DoD standards goals and Service/Agency unique standards initiatives.

f. Act as waiver authority for the Defense Standards Program.

g. Participate in the Service acquisition process to ensure that standardization and performance-based requirements are properly addressed, and to implement the attached acquisition improvement principles.

h. Prepare annual reviews for the Deputy Secretary of Defense on the status of the Service/Agency Standards Improvement Program.

i. Develop, submit and defend a separate budget line item for Service/Agency Standards Program.

As a member of the Defense Standards Improvement Council, the Standards Improvement Executive shall:

a. Assist in the development of DoD policies to improve acquisition through the use of standardization, nondevelopmental items, acquisition streamlining, and other related functions.

b. Identify the Service/Agency goals and resources necessary to accomplish those goals.

ATTACHMENT 1

c. Influence Service/Agency resource commitment decisions to accomplish acquisition improvement functions and implement Defense Standards Improvement Council recommendations.

Participate in the establishment of *ad hoc* working groups, as required, to conduct studies and prepare recommendations to the Council for the solution of identified problems.

e Represent the Service/Agency in the resolution of issues that cannot be resolved at a lower level.

f. Participate in the review of management and manufacturing standards to confirm that they have been converted to performance-based specifications.

DRAFT MEMORANDUM

MEMORANDUM FOR Service/Defense Logistics Agency Acquisition Executives

SUBJECT: Assignment of Service/Defense Logistics Agency (DLA) Standards Improvement Executives

1. In concert with recent DoD initiatives in acquisition reform, each of the three Military Services and DLA are to assign a Standards Improvement Executive. The Standards Improvement Executive shall execute the functions and tasks delineated in the attached charter. These Executives shall participate in the Service/Agency acquisition process to ensure that acquisition reform issues, as related to specifications and standards, are implemented across the Services and DLA. In concert with their participation in the acquisition process, these Service Executives positions shall be designated as critical acquisition positions and the Executives shall be Level III certified in accordance with the Defense Acquisition Workforce Improvement Act.

2. Your response is required no later than two months after the date of the directive. The senior official that has been assigned to chair the Defense Standards Improvement Council is _ NAME , OFFICE . Your responses shall be directed to OSD SIE NAME .

Signature Block

ATTACHMENT 2

ACQUISITION IMPROVEMENT PRINCIPLES

1. Use a concurrent engineering team approach for multi-functional integration throughout the life cycle.

2. Find opportunities to reduce cycle time in all acquisition processes.

3. Develop acquisition strategies which set priorities, identify streamlined paths to early fielding, and reduce barriers to commercial business practices.

4. Reduce functional requirements in every aspect of an acquisition. Eliminate all that add little or no value.

5. Base RFPs on product performance-based specifications. Remove barriers to dual-use technologies and modern manufacturing practices.

6. Apply best value source selection to both large and small procurements. Streamline the source selection process.

7. Integrate cost-effective testing throughout the life-cycle. Involve testers early in the process.

8. Promote quality through customer focus, process review, and continuous improvement.

9. Institutionalize these principles at all levels. Train continuously to operate as cross-functional teams.

10. Use electronic media infrastructure to reduce cost and improve quality.

ATTACHMENT 3

General Acquisition Reform

In addition to materiel operational requirements and performance requirements driven by threats, numerous other objectives are levied on the materiel acquisition process. These requirements flow from the Executive Departments and Congress. Examples include socio-economic program requirements, safeguards, and checks and balances, to ensure that the best interests of the U.S. Government and its citizens are served.

Processes are developed to meet these objectives and where appropriate, military specifications and standards are used as "tools" in executing the processes. The previous recommendations in this report focused on process improvement and/or changing the tools used in the process. The recommendations presented in this chapter are more focussed on process change. Although their relationship to military specifications and standards is not as direct as it is in previous recommendations, the PAT felt these changes are essential to acquisition reform and specifications and standards reform. They are recommended for consideration in the overall acquisition reform initiative.

Commercial Practices: On cost grounds alone, there is little rationale to use a military specification for an item that is functionally identical to an off-the-shelf commercial product. In fact, the Services and DLA have developed a number of innovative procedures that resemble commercial procurement practices. They include: prime vendors, shared production, qualified manufacturer lists, best value contracting, acquisition streamlining, and nondevelopmental procurements. There is enormous opportunity to expand the use of these practices though information networking. The PAT recommends that DLA and the Services develop a way of sharing information on innovative contracting approaches to decrease the number of items being bought to military specifications.

Partnering: Ongoing partnering with industry, whether in the development of NGS, conversion to performance-based specifications, contractor-proposed alternatives to military specifications and standards, critique of military specifications and standards, or reducing the burden of formal reporting and contractor test and inspection requirements, is pivotal to the new standards paradigm.

As long as the rules mandate an arms-length relationship with industry suppliers, the goal of establishing a unified production base will remain problematic. DoD needs to be able to establish working relationships with its contractors to gain access to data without having to formalize a requirement for that data or to help design tests and participate in the testing process rather than simply waiting to see if the results are acceptable. The PAT recommends encouragement of the partnering concept in all phases of the acquisition cycle during contract execution.

Activity-Based Costing and Management: Today's accounting system assumes implicitly that all overhead categories apply more or less equally to all production. Consequently, overhead costs are spread across different contracts, irrespective of the fact that different products and production lines have different resource requirements.

An essential part of the cultural change is to establish a method of allocating the costs associated with specific requirements. Under current accounting practices, it is difficult to analyze individual cost drivers or identify inefficiencies. Under an activity-based costing system, each category of cost can be related to a specific activity in research and development or production. With that data, it is possible to quantify the costs of government laws, regulations, and requirements.

The PAT recommends the establishment of policy guidelines that will allow contractors to use activity-based costing on new contracts without appearing to have changed their cost accounting systems for government contracts. Regulations already permit the use of activity-based costing but many contractors fear the risk of changing accounting systems.

Integrated Product Development: The use of performance specifications provides far more latitude to contractors to develop alternative design and engineering solutions that satisfy DoD needs. But it also places an extra burden on the government to state its requirements correctly. One important tool needed to manage the risks associated with performance-based documents is integrated product development (IPD).

IPD is based on using multifunctional teams to address key development and production issues concurrently. IPD is a preferred approach precisely because it brings together all the functional disciplines required to design, develop, test, produce, and field a system at the correct time in the acquisition cycle. It can be used before and after contract award.

The PAT recommends policy guidance be issued encouraging the application of IPD in the program offices. DoDI 5000.2 should be revised to embed the IPD approach.

Summary of Recommendations and Implementation Agenda

Recommendation: Use innovative approaches in the acquisition of weapon systems, components, and replenishment items by using commercial practices.

- Develop plans to exchange innovative procedures on acquisition initiatives among DLA and the military services.

Recommendation: Increase the use of "partnering" in contracts and program management to improve relationships and communication between government and industry.

- Develop a DoD manual and a contracting clause, for contracts estimated at $1M or over, to encourage government-industry partnering. Partnering may be used in contracts of lower value if desired.

Recommendation: Continue to encourage and assist contractors to use activity-based costing in circumstances where the method could improve cost allocations, bidding, and cost reimbursements.

- Request that the Cost Accounting Standards Board consider amending regulations to provide that adoption of activity-based costing on new contracts will not be considered a change in accounting systems on existing contracts. If the request is approved, establish a DoD policy that encourages contractors to use activity-based costing on new contracts.

- Incorporate activity-based costing and management into the training process to familiarize the acquisition work force with the approach.

Recommendation: Integrated Product Development as the preferred risk mitigation tool for all developmental acquisitions.

- Revise DoDI 5000.2 to require the application of IPD in the program offices.

- Institute training on IPD for the acquisition work force.

Commercial Practices

RECOMMENDATION: Use innovative approaches in the acquisition of weapon systems, components and replenishment items by using commercial practices.

DISCUSSION: The DoD purchases many products that are almost identical to items purchased by consumers and industry. Traditionally, DoD has described its requirements in terms of military specifications in order to ensure quality, promote competition, and generally satisfy a host of procurement regulations and procedures. In many cases, using a military specification to purchase a commercial-type item is no longer necessary. In fact, the military services and the Defense Logistics Agency have developed a number of innovative procedures that resemble commercial procurement practices.

These practices rely on private industry to make quality products and on the customer to make value-based decisions. They also reduce complexities and save time. Some examples include (see Appendix E for detailed explanations):

- Prime Vendor - efficient order and delivery methods.
- Shared Production - same facilities and people.
- Qualified Manufacturer's List - process-based Quality Assurance (QA).
- Customer Value Contracting - quality range for choice.
- Acquisition Streamlining - deviations from some Federal Acquisition Regulation (FAR) provisions.
- Nondevelopmental Procurements - commercial drawings and logistics support

Opportunities exist to expand the commercial practices used by the hundreds of DoD procuring offices. Through networking, documenting proven best practices, and sharing lessons learned, the number of items currently being bought with a military specification could be reduced significantly.

BARRIERS:

- Statutes/Regulations. Numerous statutory impediments prevent buying defense items in a commercial manner; The Truth in Negotiations Act, Defense Cost Accounting Standards, the Small Business Act, and the Buy American Act are examples. Clauses and provisions in the FARs, the DoD FAR Supplement (DFARS), and the individual service regulations make it difficult to emulate completely best commercial business practices.

- Resources. Resource constraints, perceptions that the changes will be too hard and create more work, lack of funds, and the changes to organizational structure are possible excuses for not accepting change.

- Paradigms. If DoD is to conduct business in a commercial way, paradigms must be shifted. Ideas such as "it's easier to do things like we always have," or "it's worked in

the past so leave things alone," or "quality products can only be acquired by using milspecs" may keep DoD from making this cultural transition.

- Opposition. Small business and inflexible DoD interests may oppose this initiative.

IMPACT:

PRO:

- Reduced government control/oversight by Defense Contract Management Command (DCMC) can result in lower administrative costs and a more efficient and simplified acquisition process for DoD and its suppliers.

- Innovations facilitate the use of dual production; technological advances will be more readily available for both civilian and military production capability.

- Commercial practices, such as direct order/drop shipment, require less DoD capital frozen in inventory and less operational capital by reduced storage space and handling costs.

- Trust and stronger nonadversarial relationships.

CON:

- Standardization may be impacted adversely if more National Stock Numbers are introduced by virtue of less control.

- Long-term contracts with suppliers may be viewed as adverse by virtue of reducing the number of competitions. An initial increase in the number of compl.ints is likely.

RESPONSE:

- Careful management of specifications and standards will be applied as required.

RISK:

- Increased risk of fraud with less oversight; suppliers will have more opportunity to cheat DoD and some will do so.

- Quality might suffer with 'ess government control.

- Value-based customer choice instead of "low bid" may appear to be inappropriate spending of DoD dollars.

- Value-based selections may be influenced significantly by advertising, i.e. brand recognition equals preference.

- Any "horror story" that occurs may provide extensive negative publicity.

R SPONSE:

- Risks will be reduced by education, training, and publicity.

IV. 'LEMENTATION:

Develop plans to exchange innovative procedures on acquisition initiatives among the mil. :y Services and Defense Agencies.

Re ponsibility: Acquisition Executives of the Services and Defense Agencies develop indiv lual plans to share experiences. Assistant Secretary of Defense (Economic Security) will e .sure compliance and inform senior leadership. (Draft Memorandum is attached.)

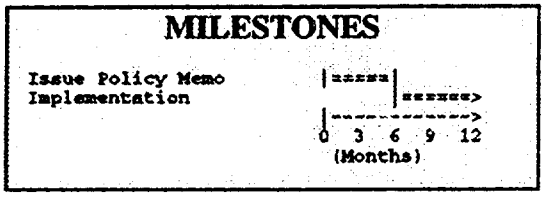
RESC !RCE REQUIREMENTS:

None r quired.

METRI 'S:

None rec uired.

SCHEDU LE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives/Defense Agencies and Direct Reporting Units

SUBJECT: Acquisition of Weapon Systems, Components, and Replenishment Items

1. The Department of Defense is committed to expanding the use of commercial business practices in acquisition as part of the overall impetus to chan_e our acquisition culture.

2. Many successful practices mirroring the commercial sector are being used already within DoD. Examples are the concepts of the Prime Vendor Program, Shared Production, Customer Value Contracting, and Nondevelopmental Item programs.

3. I direct that each Agency and Service develop a plan for sharing these innovative practices to include periodic updates on the successes and shortcomings experienced. Classical cases should be identified for use in the Road Shows and satellite communications training.

4. By sharing our successes and disappointments we can accelerate acquisition reform, gain public confidence, and improve our role as stewards of the resources entrusted to us.

5. Please submit your plans to this office within six months.

Signature Block

ATTACHMENT

Partnering

RECOMMENDATION: Increase the use of "partnering" in contracts and program management to improve relationships and communication between government and industry.

DISCUSSION: The concept of partnering envisions government and contractors working together towards the common goal of providing quality equipment and services in a cost-effective and timely manner.

- Partnering, which is built on trust, teamwork, and timely communication between government and the contractor, allows the resolution of contract and program problems before they reach the level of conflict, dispute, and litigation.

- Partnering involves an informal process and voluntary relationship agreement between two or more organizations for the purpose of improving communications and avoiding disputes.

- Positive results have been demonstrated in Service programs where partnering has been used. These contracts were completed within cost and schedule, with a reduction in administrative effort and paperwork.

- The steps in the partnering process include: early preparation, management commitment, joint partnering workshops, establishment of the partnering charter, and follow-up evaluations.

BARRIERS:

- Reluctance on the part of government and contractor personnel to develop positive working relationships with contractors instead of their traditional, arms-length, adversarial role.

- There are no statutory or regulatory barriers to prevent implementation of this recommendation; however, specific DoD emphasis is required.

IMPACT: Adopting the implementation strategy will provide significant benefits to government and industry.

PRO:

- Partnering reduces costs, avoids program delays, eliminates program disruption, and promotes a healthy business relationship between government and the contractor.

- Partnering results in:

  - Prevention of disputes

- Timely resolution of conflicts
- Improved communications
- Mutual trust
- Better management of the contract
- Reduction in paperwork
- Reduced litigation
- Fewer surprises

CON: None.

RISKS: Risk associated with the proposed implementation plan is considered insignificant.

IMPLEMENTATION PLAN:

Task: Issue policy guidance encouraging partnering and prepare a DoD handbook or manual on partnering concepts and techniques (Additional information and discussion charts are available from Command Counsel, Headquarters, Army Materiel Command). The guidance would be as follows:

Partnering: The Department of Defense has a continuing effort to improve the relationships and communications between the DoD and industry. Establishing partnering relationships and other alternative dispute resolution techniques with contractors can provide a significant benefit to this overall effort, as well as provide tangible benefits on individual contracts in terms of reduced cost and reduced delays and disruption.

Pending issuance of a DoD manual, procuring activities and program managers are encouraged to establish partnering relationships in accordance with departmental guidance with contractors where the proposed contract is estimated at $1M or more. Partnering may be used in contracts of lesser value where appropriate.

The following contract clause is provided as sample language to establish partnering within a contract. Actual contract language may require negotiation between the parties as individual contact circumstances dictate.

Sample Partnering Clause

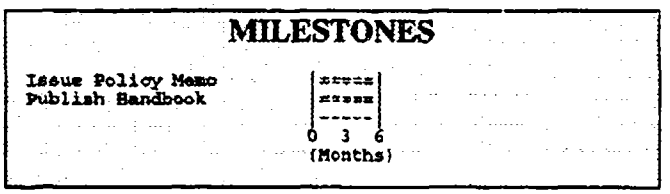
"In an effort to accomplish this contract effectively, the Government proposes to participate in a concept called 'partnering' with the contractor. This cooperative effort would strive to draw on the strengths of each organization in an effort to achieve a quality project the first time, within budget and on schedule. Participation in this bilateral effort will be totally voluntary. Any costs associated with effectuating this partnering effort will be agreed to by the parties and will be shared equally with no change in contract price."

Responsibility: The Under Secretary of Defense for Acquisition & Technology.

RESOURCE REQUIREMENTS: Additional funding or manpower to develop and publish the proposed policy guidance is not required.

METRICS: Number of contracts issued annually employing partnering.

SCHEDULE: Milestone schedule is as indicated.



Activity-Based Costing and Management

RECOMMENDATION: Continue to encourage and assist contractors to use activity-based costing in circumstances where the method could improve cost allocations, bidding, and cost-reimbursements.

DISCUSSION: An essential part of the cultural change required to reform the use of military specifications and standards in the acquisition cycle is establishing a method to consider the costs associated with application of a particular document. Current cost accounting systems do not provide the necessary information to effectively manage this process. Changes in accounting and financial reporting are necessary in order to implement any changes to defense procurement. Changes that will encourage dual-use production in the future require a more precise way for contractors and the government to measure and analyze costs.

Activity-based costing identifies each category of cost (direct or overhead) and relates it to the specific product (e.g., military specification or standard, statement of work task, etc.) or product line that causes the activity to be needed and performed. Equally important, it will be possible to quantify, on a verifiable basis, the costs contractors incur in meeting government mandated regulations and laws.

Today's accounting system implicitly "assumes" that all overhead categories apply more or less equally to all production. These overhead costs are "spread" on the basis of direct labor content or direct material content, irrespective of the fact that different products/product lines have vastly varying resource requirements. With current accounting practices, it is difficult to analyze actual costs accurately, or to identify inefficiencies and so-called Non-Value-Added activities. Activity-based costing can identify the specific products that "cause" or "use" substantial amounts of engineering resources, purchasing resources, material handling resources, testing, and inspection. This information then can be used to make "activity-based management" decisions.

Virtually all commercial firms now using activity-based costing are doing so "off-line." That is, they have not changed their basic cost accounting used for preparing monthly, quarterly, and annual audited financial reports. They are performing the activity-based costing analyses periodically, using it as a management tool for decision-making.

Tests of activity-based costing have shown that low-volume production is basically under-costed, and therefore under priced, while high volume production is over-costed and over-priced. Such allocation errors can be eliminated, since activity-based costing will identify and quantify every overhead cost, both in total and individually, including those caused by government specifications, procurement laws, and regulations.

Activity-based costing replaces acceptance of a contractor's generalized statement that "it cost 25-30 percent more to do business with the government" (statement that is often perceived as self-serving) with identification of each element of the additional burden, quantified in a verifiable and supportable manner.

Defense contractors have generally been unwilling to explore the benefits of activity-based costing, although most nondefense firms have found that the information developed by this method is exceptionally valuable. Present cost accounting standards have been interpreted by industry to be such that, if a contractor who is currently not using activity-based costing begins to use the method, this could be considered a change in cost accounting, as defined by the cost accounting standards. If this interpretation stands, (and few contractors have been willing to test this interpretation) the adopting contractor will be penalized severely on existing contracts.

A primary argument for the creation of the Cost Accounting Standards Board, and adoption of government-wide cost accounting standards, was a perception that contractors were "not playing fair." Contractors were perceived as using one system to develop cost estimates and then using a different cost accounting system to determine reimbursable costs. Cost accounting standards put an end to this practice, but the result was a rigid accounting methodology.

Today's system takes total corporate overhead and charges it all to the actual volume of this year's production. This creates a situation where as volume goes down, reported unit costs go up, and a so-called "death spiral" occurs. For that defense related production capability where today's procurement volume is below optimum production levels, and today's accounting system charges all capacity related overhead to the current low production volumes, we will see the death spiral.

Culture change extends to the auditors who must accept that contractor costs incurred solely because of DoD requirements, statute, or regulation will have to be borne solely by defense production. Therefore, in a dual-use facility, two levels of overhead will be identified, a higher one for Defense and lower one for commercial. This visibility of higher defense related costs may cause procurement officials to question the cost/ benefit relationship of some of the DoD requirements and, in turn, help to work for change.

BARRIERS: The challenge to activity-based costing will come most frequently from misinterpretation and misunderstanding of the concept.

- Interpretation that a contractor who begins using or adopts activity-based costing is changing the method of cost accounting, prevents adoption by firms with both commercial and defense production.

- Contracting officers, program managers, and government auditors are unfamiliar with this new accounting tool. This unfamiliarity may lead to the perception that contractors could take advantage of the Government.

IMPACT: The following impacts result from this recommendation:

PRO: The positive aspects of permitting contractors to use activity-based costing, without penalizing them for a change in cost accounting, will be far-reaching.

- Contractors will, for the first time, be able to identify, quantify, and segregate costs related solely to Defense procurement. Dual-use of existing facilities would be possible

and even encouraged, because commercial business would not have to absorb overhead costs related only to the defense business.

- Activity-based costing will alleviate the need for plant-wide overhead rates that many contractors believe cause their commercial work to subsidize defense volume. This causes many firms to believe that, with today's accounting systems, it makes sense to segregate defense work completely. In total, separate facilities and staff add to corporate overhead, and in turn this means DoD ends up paying more.

- Activity-based costing explicitly provides the accounting methodology to identify and quantify defense-related costs in such a way that they do not impact actual or potential commercial work. The concern is that if a contractor shifts to activity-based costing, existing contracts that would show a higher cost will not be adjusted, but contracts with lower reported costs would be subject to refunds to the government. However, if the contractor can show that a voluntary accounting change is beneficial and not detrimental to the government's interest, the contractor can obtain equitable adjustments on all affected contracts.

- Activity-based costing will permit contractors, and the government, to calculate the cost of maintaining unused (mobilization or surge) capacity for the Defense Industrial Base. As volume decreases, decisions as to how much to spend for what type of capabilities (activity-based management) are supported by activity-based costing information.

- Contractors who adopt activity-based costing will be able to identify and quantify the unique costs associated with government procurement (e.g., socioeconomic requirements).

CON:

- Changing the accounting system does not change the total costs.

  Response: Although total outlay will still occur, sounder decisions can be made if the cost of an overhead is separated from the cost of production.

- The contractor and the government will incur additional costs for the period of time that two separate cost systems must be maintained.

  Response: The magnitude of this cost is hard to determine, but it is expected to be relatively small, and of a limited duration.

RISK: There is the potential for double-counting overhead if activity-based costing is applied to existing contracts.

Response: As long as activity-based costing is permitted and used only on new work, there should be no chance for double counting.

IMPLEMENTATION PLAN: Activity-based costing can be implemented by a change in DoD policy and establishment of a training program for acquisition personnel.

Task 1: Policy. Request that the Cost Accounting Standards Board consider amending regulations to provide that adoption of activity-based costing on new contracts will not be considered a change in accounting systems on existing contracts. All contracts in existence at the time of initiation would continue using existing cost accounting methodology. If the request is approved by the Cost Accounting Standards Board, establish a DoD policy that encourages contractors to use activity-based costing on new contracts. (A draft DoD policy statement is provided at Attachment.)

- Recommendation is that contractors be encouraged, not required, to use activity-based costing, so that the decision will rest with individual contractor firms in the private sector. DoD needs to do nothing with respect to individual contractors; the initiative has to come from them.

Responsibility: The office of primary responsibility to initiate action is the DUSD(AR).

Schedule: This recommendation can be implemented immediately upon receiving approval from the Cost Accounting Board.

Task 2: Training. Establish a program to train DoD acquisition personnel in the elements and methodology of activity-based costing methodology. Since the private sector is already accomplishing this training function and training resources are already available, no development will be required. A commitment and some out-of-pocket expenses to bring the necessary government personnel up to speed are the only requirements.

Responsibility: Buying Commands.

Schedule: The training program can be implemented immediately (since no development is required). Completion of training the necessary members of the acquisition work force should be accomplished in two years.

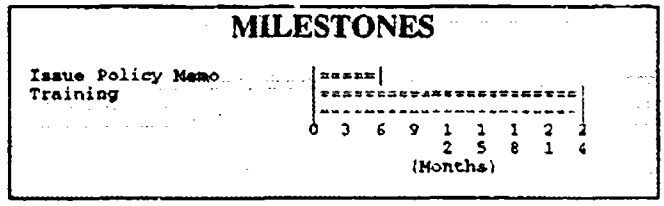
RESOURCE REQUIREMENTS: These resource requirements are included in the resource section of the Acquisition Reform Training recommendation and are not additive to the total resource requirement for this report.

YEAR	1	2	3	4	5
FUNDS					
Policy/Regs	0	0	0	0	0
Training	$ 1M	1M	0	0	0
WORK-YEARS	0	0	0	0	0

METRICS:

- Measure percentages of contracts and contractors where activity-based costing and activity-based management are in use, on an annual basis.

SCHEDULE: Milestone schedule is as indicated.



DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives/Defense Agencies
Director, Defense Logistics Agency

SUBJECT: Activity-Based Costing (ABC) and Activity-Based Management

Today's accounting systems, while adequate in determining overall costs, do not provide the necessary information to be used as a management tool. To provide management with the knowledge about what costs are and how to manage using cost data, a new field of accounting has emerged, i.e., Activity-Based Costing (ABC) and Activity Based Management. ABC captures and quantifies costs more accurately than broad-based overhead rates and allows management to make activity-based management decisions such as eliminating non-value-added cost drivers.

ABC is available to DOD contractors. It is fully compliant with DOD Cost Accounting Regulations. To identify and eliminate all nonessential costs in manufacturing defense products, all DOD contractors should be encouraged to convert to ABC or to use it as a management tool.

It is important that all acquisition personnel involved in the cost accounting process be aware of the benefits of ABC and be trained in how to use it.

Signature Block

ATTACHMENT

Integrated Product Development (IPD)

RECOMMENDATION: IPD will be the preferred risk mitigation tool for all developmental acquisitions.

DISCUSSION: The use of performance specifications and standards addressing only form, fit, and function leaves methods of solution to the contractor's ingenuity. As long as the offered design meets the government's stated performance requirements, the government must accept that solution. This places an extra burden on the government to correctly and completely state its requirements. One facet associated with using performance-based specifications is the strategy of leaving configuration control of the product baseline (government control being retained at the functional level) with the contractor well into, or possibly through, the production phase of the acquisition life cycle.

Using performance-based specifications coupled with keeping configuration control with the contractor raises the programmatic risk to a level that must be proactively addressed and mitigated. IPD methodologies are proven management tools that will help reduce this risk.

IPD is based on employing multifunctional teams vice a stovepipe application of functional disciplines. It employs the right people at the right time to solve issues. IPD practices were first used with great success in the Japanese auto industry following World War II. They were adopted by the U.S. auto industry in the 1980s as a way to improve their competitiveness. By using multifunctional teams, automotive development and production concerns (such as design, logistics, manufacturing, safety, environmental, etc.) were concurrently addressed early and continuously. The use of integrated product teams is the key to IPD. Bringing together the right people at the right time increases the probability that all requirements will be considered at the correct time, thus reducing program risk.

The use of IPD methodologies in the systems acquisition arena is the required approach precisely because it brings together all the functional disciplines required to design, develop, test, produce, and field a system at the correct time in the acquisition cycle. It is a tool that can be used both before and after contract award. By considering and bringing to bear all the necessary functional disciplines in an interactive, iterative process, IPD ensures that results are optimized rather than sub-optimized.

Prior to contract award, during the acquisition strategy development and solicitation phases, IPD methodologies will guide the program team to consider all aspects of the program and develop integrated master plans, schedules, and strategies. As an integral part of the solicitation, the government may require the responders to prepare and submit a risk reduction plan addressing how they propose to identify, control, monitor, and mitigate risk. In response to this requirement, the offeror will propose their risk mitigation concepts. During the negotiation phase the government and the contractor will reach a common understanding and an agreement of how risk will be managed. Subsequent to contract award, the government and the offeror offices will team and implement the risk management plan.

BARRIERS:

- Program offices may not have sufficient numbers of acquisition professionals to practice IPD without using a matrix organization or seeking additional assistance. However, team members need not dedicate 100 percent of their time to a product team.

- Program managers may not feel comfortable empowering employees to make important acquisition management decisions. Training will overcome this, given time and a culture change.

- The IPD management approach permits time for group negotiation and coordination. Once consensus is reached, those who use this approach have found that implementation time is reduced and a product of higher quality is produced.

- The successful implementation of IPD requires that both the government and industry understand its principles, objectives, and desired results, and undergo comprehensive training to fully comprehend theory and application principles.

- The results, as demonstrated by several programs, fully justifies the time and effort needed to implement IPD.

IMPACT:

PRO:

- Better tailoring. Only the minimum essential requirements will be included as a result of the team effort.

- Greater compatibility with commercial manufacturing processes results from including industry on the team and considering their input objectively.

- Reduced program risk resulting from an in-depth understanding of the contractor's approach and an agreed-to risk management plan.

- Obtains right "mix" of civilian/government specifications and standards.

- Helps build confidence in commercial business practices.

CON:

- Modest up-front demand for resources (people and funding) to support concurrent approach.

- Emphasis on form, fit, and function could adversely impact procurement of spares if parts proliferation occurs.

RISK:

- The program manager may not be able to justify a larger up-front resource requirement without many examples that guarantee overall savings and program success.

- The program manager may require a specific implementation of IPD rather than fully evaluating the contractor proposal and tailoring the solution to the peculiarities of the program.

IMPLEMENTATION PLAN:

Task 1: Policy. Policy statement requiring the application of IPD in the program office. The following statement should be added to DODI 5000.2, Part 5, "Acquisition Strategy":

> "The Program management offices will use Integrated Product Development (IPD) as the recommended and preferred approach for new developmental acquisitions. IPD is an efficient management methodology that capitalizes on concurrent engineering principles, applying them to other program office functions. IPD employs a teaming of functional disciplines to integrate and concurrently apply necessary processes to produce an operationally required product that optimizes cost and schedule, increases product quality, promotes professional employee growth and performance, and enhances customer satisfaction."

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

Schedule: See milestone schedule.

Task 2: Training. Institute training on IPD for the acquisition workforce. (1) Revise and conduct refresher training to make program managers and technical experts aware of the new acquisition tools. (2) Revise acquisition specific training under the career development program to emphasize use of IPD. (3) Revise career progression courses as necessary.

Responsibility: The Deputy Assistant Secretary of Defense (Production Resources) is the primary office of responsibility to initiate actions. DAU will be responsible for execution.

Schedule: See milestone schedule.

RESOURCE REQUIREMENTS:

	$ Funding	Manpower
Policy	0	0
Training		
Course Development	1.0M	0
Teaching	8.0M	0
Continuing Education	1.5M	0

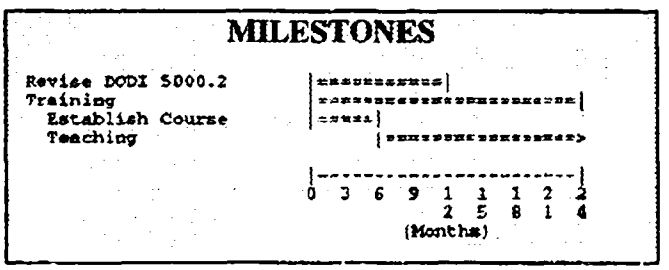
(These requirements are included in the resource section of the Acquisition Reform Training recommendation, and are not additive to the total resource requirement for this report.)

METRICS:

- Task 1. Number of Program Offices using IPD (percent newly established programs; percent of total programs).
- Task 2. Number of students (percent acquisition corps, percent procurement activities covered) through course.

Both metrics will be monitored by the Service Standards Improvement Executive.

SCHEDULE: Milestone schedule is as indicated.



Chapter Ten

Conclusion

The PAT recommendations have been proven and have been applied with great success in a limited number of current programs. For reform to succeed, we must employ all or most of the recommendations in the majority of DoD's programs. While this entails moderate-to-low risk, the PAT concludes that greater risks stem from not taking the actions recommended here. Without bold steps in the specifications and standards arena, DoD will not be able to afford the price of maintaining modern defenses. Its ability to surge for crisis production needs could be limited to a handful of defense unique manufacturers. In the PAT's view, there is no other viable alternative.

The recommendations presented in this report require an up-front investment by DoD. Any notion that fundamental reform of the specifications and standards process can be accomplished without additional cost is misguided. Piecemealing recommendations in the report offers no prescription for success. Collectively they constitute a cultural change. The PAT estimates that the cost of implementing a full reform agenda for specifications and standards is approximately $300M over the next five years.

This DoD leadership, even more than its predecessors, is engaged by critical and competing issues that consume energy, attention, and most of all, time. While specifications and standards are not a topic that captures the hearts and minds of America, they are nonetheless one of the primary building blocks of a multipurpose manufacturing base. They merit far more concerted attention, policy leadership, and management involvement than it has received to date. Specifications and standards reform must be an integral aspect of acquisition reform.

A number of key metrics have been identified for which data should be collected and, more importantly, reviewed. These include milestones, annual reports by the Standards Improvement Executives, and customer surveys.

The report recommends a number of regulatory and policy changes that can be undertaken immediately. These are detailed in the report and Appendix H.

Beyond a highly visible launch of the specifications and standards reform package, the PAT recommends that DoD management track its progress and participate in the cultural changes. Our challenge lies in leadership, education and implementation.

Resources

The PAT recommendations described in this report require the full support of the DoD leadership. They also require that the USD(A&T) determine and obtain out-of-cycle funding for the tasks of this report until identified resource requirements can become part of the Planning, Programming, and Budgeting System. This requires an up-front investment of funds which, if not available, could be the stumbling block to reform. In this case the funding required is negligible considering the enormous costs employed to build a specification and standards system.

The resources stated herein include costs that are identified for specifications and standards reform. Training and education, for example, at the DAU for the Services and DLA are considered part of existing budgets. Desk top training will be accomplished with local funds.

Standards Program
$ in Millions

	Adjusted	Current Guidance	Required
	FY93	FY94	FY94
Army	18.4	13.7	19.0
Air Force	3.0	3.0	7.0
Navy	6.9	7.7	17.9
DLA	13.9	13.9	13.9
OSD	3.0	3.0	3.0
Total	45.2	41.3	60.8

Table 1. Current Budget Guidance

STANDARDS PROGRAM
$ in Millions

	Required						
	FY94	FY95	FY96	FY97	FY98	FY99	Total
Army	19.0	18.0	17.1	16.2	15.4	14.6	100.3
Air Force	7.0	6.6	6.3	6.0	5.7	5.4	37.0
Navy	17.9	17.0	16.1	15.3	14.5	13.8	94.6
DLA	13.9	13.2	12.5	11.9	11.3	10.7	73.5
OSD	3.0	2.8	2.7	2.6	2.4	2.3	15.8
Total	60.8	57.6	54.7	52.0	49.3	46.8	321.2

Table 2. Outyear Requirements

Training and Education
$ in Millions

	FY94	FY95	FY96	FY97	FY98	FY99	Total
Satellite Training Course Development Transmission	.8 .2	.5	.5	.5	.5	.5	.8 2.7
Road Show Course Development, Instruction & Travel	2.0	2.0	.5	.5	.5	.5	6.0
Commercial Alternatives to Military Specifications	1.0	1.0	.4	.4	.4	.4	3.6
Total	4.0	3.5	1.4	1.4	1.4	1.4	13.1

Table 3. Training and Education Budget

Automation Program
($ in Millions)

RESOURCE REQUIREMENTS: Preparation and Maintenance of Specifications and Standards

Item	Fund Type	FY94	FY95	FY96	FY97	FY98	FY99	Total
1. SDO Libraries	Proc.	4.0	4.0	4.0	4.0	3.0	2.0	21.0
	O & M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Feedback System	Proc.	0.2	0.3	0.3	0.3	0.2	0.1	1.4
	O & M	0.1	0.5	0.6	0.6	0.6	0.6	3.0
3. Assist Upgrades	Proc.	0.3	0.5	0.3	0.6	0.2	0.2	2.1
	O & M	0.5	1.6	2.0	0.9	1.0	1.0	7.0
4. DoD Doc. Library	Proc.	0.5	0.7	1.2	0.6	0.2	0.2	3.4
	O & M	0.1	0.3	0.6	0.7	0.9	0.9	3.5
5. Doc Conv./Val.	Proc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	O & M	2.6	4.3	1.0	0.0	0.0	0.0	7.9
Total	Proc.	5.0	5.5	5.8	5.5	3.6	2.5	27.9
	O & M	3.3	6.7	4.2	2.2	2.5	2.5	21.4

Table 4. Automation Resource Requirements
(Preparation and Maintenance)

Automation Program
($ in Millions)

RESOURCES REQUIREMENTS: Application of Specifications and Standards

Item	Fund Type	FY94	FY95	FY96	FY97	FY98	FY99	Total
Supplier Lists	Proc.	0.3	0.3	0.4	0.3	0.3	0.3	1.9
	O & M	0.1	0.4	0.6	0.7	0.7	0.7	3.2
Std. COTS Engr. S/W	Proc.	0.4	0.6	0.7	0.5	0.4	0.3	2.9
	O & M	0.1	0.5	0.8	0.9	1.0	1.0	4.3
Comml. Prod. Avail	Proc.	0.1	0.3	0.5	0.3	0.2	0.1	1.5
	O & M	0.1	1.5	0.6	0.6	0.6	0.6	4.0
SOW Expert Sys	Proc.	0.2	0.9	1.4	0.8	0.4	0.3	4.0
	O & M	0.1	0.3	0.6	0.7	0.8	0.8	3.3
POC Tracking Tools	Proc.	0.1	0.2	0.3	0.2	0.2	0.1	1.1
	O & M	0.1	0.3	0.4	0.4	0.4	0.4	2.0
PDES/STEP Spt.	Proc.	0.5	0.5	0.5	0.5	0.5	0.5	3.0
	O & M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	Proc.	1.6	2.8	3.8	2.6	2.0	1.6	14.4
	O & M	0.5	3.0	3.0	3.3	3.5	3.5	16.8

Table 5. Automation Resource Requirements
(Application Specifications and Standards)

Pollution Prevention

Basis for computation:

Assumptions: 75 percent of Military Specifications, Standards, and CIDs will be updated in normal cycle at 20 percent premium in cost, 25 percent will be out-of-cycle at basic cost plus 20 percent premium.

15 percent of Military Specifications and CIDs will be canceled for obsolescence/ nonuse.

Average cost to update a Military Specifications/CID is estimated at $5,000.

NGS specifications and standards will be digitized and computer scanned and data will be entered into databases for user access. NGS's will be revised by voluntary standards bodies. DoD participation in revision effort is funded in the basic standards program.

	Total
Military Specifications & Standards	30,300
CIDs	5,000
Nongovernment Standards	10,000

* Includes standards being used but not yet adopted.

Computation:

Military Specifications, Standards, and CIDs

In-Cycle: 35,300 X .75 X $5,000 X .2 = $26,475,000.

(Note: In-Cycle funding requirements are included in the Standardization Program.)

Out of Cycle: 35,300 X .25 X $5000 + .2(35,3000 X .25 X $5,000) = $44,125,000 + $8,825,000 = $52,950,000)

Subtotal $79,425,000

Canceled: 79,425,000 X -(.15) = -11,915,000

Subtotal $67,510,000

Startup Costs: $700,000

Total $68,210,000

Nongovernment Standards

Digitize 10,000 Standards for $500,000. (year one)
Digitize updates/adoptions @ $100,000/year (Years 2 - 5)

Maintenance of Environmental Database for users and preparers $500,000 (years 2-5)

Consultation with chemists $400,000 (Year 1 - 2); $100,000 per year (years 3 - 5).

Pollution Prevention Summary
$ in Millions

MilSpecs Standard and CIDs	FY94	FY95	FY96	FY97	FY98	Total
	.7	20.1	15.8	15.8	15.8	68.2
NGS	.9	1.0	.7	.7	.7	4.0
Total	1.6	21.1	16.5	16.5	16.5	72.2

Table 6.

National Standards
$ in Millions

	FY94	FY95	FY96	FY97	FY98	FY99	Total
Standardization Projects w/ Nongovernment Standards Bodies	1.9	2.0	.7	.7	.7	0	6.0

Table 7.

Conversion of Manufacturing and Management Specifications and Standards
$ in Millions

	FY94	FY95	FY96	Total
Revision of Specifications & Standards	.9	1.7	1.2	3.8
Revision of Handbooks	1.2	4.9	3.6	9.7
Revision of Training Programs		.6	.6	1.2
Studies/Industry Workshops	.5	.5	.5	1.5
Total	2.6	7.7	5.9	16.2

Table 8. Conversion Resources

OSD will allocate funds on basis of Standardization Program Plans submitted by Services and Agencies.

Obsolete Specifications
$ in Millions

	FY94	FY95	FY96	FY97	FY98	TOTAL
One Time Review for Inactive product Specification	2	1	.1	.1	.1	3.3

Table 9. Obsolete Specifications

Summary of Costs
All PAT Recommendations
$ in Millions

	FY94	FY95	FY96*	FY97	FY98	FY99	Total
Standards Prog.							
Required	50.9	48.2	45.8	43.5	41.2	39.1	268.7
Funded	(31.4)	(31.4)	(31.4)	(31.4)	(31.4)	(31.4)	(188.4)
Training & Education	4.0	3.5	1.4	1.4	1.4	1.4	13.1
Automation							
Preparation & Maint.	8.3	12.2	10.0	7.7	6.1	5.0	49.3
Application	2.1	5.8	6.8	5.9	5.5	5.1	31.2
Pollution Prevention	(1.6)	(21.1)	(16.5)	(16.5)	(16.5)	0	(72.2)
National Standards	1.9	2.0	.7	.7	.7	0	6.0
Conversion Mfg &							
Mgmt Specs & Stds	2.6	7.7	5.9	0	0	0	16.2
Obsolete Specifications	2	1	.1	.1	.1	0	3.3
Total	40.4	49.0	39.3	27.9	23.6	19.2	199.4

* Memo entry. $26.5M included in the basic standards "Required" line; $41.7M to be requested through environmental channels; $4.0M included in the National Standards line.

Table 10. Costs Summary of PAT Recommendations

APPENDIX A

CHARTER
FOR
PROCESS ACTION TEAM
ON
MILITARY SPECIFICATIONS AND STANDARDS

I. BACKGROUND

To meet future needs, DoD must have access to commercial state-of-the-art technology. In addition, integration of commercial and military development and manufacturing must contribute to an expanded industrial base that is capable of meeting defense needs at lower costs and facilitating the development of dual-use processes and products. Among the many challenges to transitioning to a more integrated industrial base and to facilitating the purchase of commercial products is the elimination of unnecessary "how to" process standards and other military-unique specifications and standards from our procurement. Since the Packard commission report in 1986 and DoD adopting its current policy to use commercial products and processes, there have been at least seven major initiatives to decrease reliance on military-unique specifications and standards. These seven initiatives are:

- 400 Federal Supply Class Initiative
- Qualified Manufacturers List (QML) Initiative
- Defense Management Review Working Group 9 Initiative
- Commercial Acquisition Demonstration Program Initiative
- Simplified Nongovernment Standard Adoption Initiative
- Commercial Military Document Tiger Team Initiative
- Special Nongovernment Standards Conversion Initiative

The outcome of these initiatives has been mixed. Although progress has been made--DoD has increased the number of adopted nongovernment standards from 3,279 to 5,617 (a 51% increase) and the number of commercial item descriptions from 1,973 to 4,857 (146% increase) over the last seven years--it is not being made quickly enough.

The Deputy Secretary of Defense has directed that use of military-unique specifications and standards will be prohibited unless they are the only practical alternative to ensure a product or service will meet the user's needs. To accomplish this goal, a strategy and a specific plan of action must be developed and implemented that is both practical and achievable.

II. AUTHORITY

The Deputy Under Secretary of Defense (Acquisition Reform) directed that a cross-functional process action team be formed including representatives from the Office of the Secretary of Defense, the Military Departments, and the Defense Logistics Agency to develop a specific and comprehensive plan of action to ensure maximum progress within the shortest period of time towards elimination of unnecessary military product and process standards and specifications. The team will comprise appropriate representatives to ensure a broad acquisition perspective. The members of the Defense Standardization Council and the Nondevelopmental Item Advocates will participate in the deliberations as needed and as schedules permit. Additional functional and technical support and coordination will be provided from appropriate offices as needed.

III. PURPOSE

The team will develop, within 60 days, a comprehensive plan to ensure that DoD describes its needs in ways that permit maximum reliance on existing commercial items, practices, processes, and capabilities while protecting the Government's interests, and an assessment of the impact of the recommended actions on the systems acquisition process. The team shall be guided by, but not limited to, the following goals:

- Perform comprehensive market research to identify potential commercial alternatives, and conduct aggressive cost-performance trade-offs to ensure that system requirements do not unnecessarily preclude commercial products or processes;

- State requirements in terms of form, fit, function, and performance--eliminate "how-to" requirements for management and manufacturing processes and permit "best commercial practices;"

- Eliminate unnecessary and obsolete specifications and standards;

- Use commercial-type specifications and standards, and nongovernment standards to the greatest extent practical. Expedite conversion of military specifications and standards for commercial products to commercial item descriptions (CIDs) and nongovernment

standards (NGS), and work with NGS bodies to fill needs for documents where suitable NGSs do not exist today;

- Where military specifications and standards are used, encourage industry to propose alternative solutions as substitutes for the referenced military specifications and standards to the maximum extent practicable; and

- Ensure that specifications and standards are applied correctly on contracts.

The team will develop a strategy and a specific recommended plan of action to achieve these goals for both immediate implementation, and for longer term improvements to the process.

IV. ROLES AND RESPONSIBILITIES

The Deputy Under Secretary of Defense (Acquisition Reform) has appointed Mr. Darold L. Griffin as executive director for the team. The DUSD (AR) and Mr. Griffin will appoint a chairperson (or persons) to be responsible for task accomplishment, management of team activities, and reporting.

The executive director will identify, with each Military Department and DLA, appropriate representatives in each of the following functional areas and any other functional areas deemed necessary by the executive director:

- Program Management (PM)

- Nondevelopmental Item (NDI) Advocate

- Defense Standardization Program (DSP)

- Administrative Contracting Officer (ACO)

- Procurement Contracting Officer (PCO)

- Competition Advocate

- Quality Assurance (QA)

- Reliability and Maintainability (R&M)

- Systems Engineering

- Logistics

The Joint Staff will provide a representative familiar with requirement generation. Representatives from industrial advisory groups (e.g., AIA, SAE), academia, and OSD offices (e.g., API, DDP, PR/MM, GC) will act as advisors to the team. Ideas and comments will be sought from other interested parties as necessary.

An Industry Specifications and Standards Review Panel is established, chaired by Mr. Willis J. Willoughby, to ensure industry input to the process action team. The Panel will assist the Military Specifications and Standards process action team and provide input to the Executive Director for incorporation into the team's strategy and action plan.

V. TASK OBJECTIVES

a. Review previous initiatives to decrease reliance on military specifications and standards in order to identify impediments to reform. Include in this review the recommendations of the CSIS report, "Road Map for Milspec Reform: Integration Commercial and Military Manufacturing."

b. Develop a comprehensive set of recommendations, including alternatives, to implement the goals stated in the purpose statement above.

- Establish priorities for change, identifying high pay-off areas for immediate action and identifying areas of no pay-off for exclusion.
- Analyze test or model programs and best practices within various DoD organizations and industry to emulate DoD-wide.
- Identify the appropriate roles of DoD personnel (e.g., contracting officers, program managers, program executive officers, contract administration officials, OSD and component staffs) in the process.
- Identify appropriate mechanisms for industry input in the development of specifications and standard and review overage documents, including any automated system.
- Develop a plan for the use of third party certifiers (e.g., UL, NADCAP, etc.) and standard setting organizations (e.g., ASTM, IEEE, SAE, etc.) indicating how use of such organizations can obviate the need for DoD and prime contractor audit and inspection of product and process specifications and standards.

- Identify methods to ensure that out-of-date and inappropriate non-DoDISS specifications and standards (i.e., unique, one- time specifications and standards) are not being put on contract.

- Ensure that referencing military specifications and standards in contracts does not require the application of more military specifications than necessary, i.e., that unnecessary tiering does not occur.

- Identify any information technologies that might lead to process improvements addressing the enunciated goals.

- Identify methods to ensure that actions taken during requirements generation or the systems design process do not preclude use of commercial products or practices.

c. Evaluate the impact of implementing these recommendations for major systems, less than major systems, system support equipment, spare and repair parts, base support equipment, supplies and consumables.

d. Identify the impact of using commercial products, processes, and specifications on standardization.

e. Identify and quantify potential areas of risk or uncertainty and potential benefits to DoD from implementing these recommendations including contracting efficiencies, effectiveness, process improvements, reduced lead time, lower purchase price, impact on logistics support, impact on how DoD assures compliance with requirements, etc.

f. Identify barriers to implementation, relevant policy issues, and develop options for dealing with the barriers. Determine who supports and who opposes the recommendations and why. Determine the ease or difficulty of making proposed changes.

g. Identify any required changes to current policies, directives, instructions, or regulations to implement the preferred approach. Identify any new contracting and/or systems acquisition practices, strategies, or approaches necessary to achieve the preferred approach including use of warranties, etc. as appropriate.

h. Develop metrics to measure progress towards the new system.

i. Create a plan for implementing the preferred recommendations, including esource and training requirements, to ensure implementation of changes as expeditiously as ossible, with specific time frames for action on each recommendation, and identification of ndividuals responsible to ensure the action is carried out. Identify how to structure incen- ives into the process to assure pursuit of the preferred approach.

j. Identify a system for follow-up to assure compliance with recommendations and ensure recommendations are accomplishing the goals with minimum side effects.

VI. RESOURCES

OSD will provide funds to support costs, other than salaries. All other administrative and personnel expenses will be supported by the components.

VII. SCHEDULE

The process action team will start this effort immediately. The team will complete its analysis and provide an interim report to the DUSD (AR). Recommendations will be coordinated within the Military Departments and the Defense Logistics Agency and a final report and recommendations, with implementing documentation, will be provided to the DUSD (AR) no later than 60 days after the team begins its work.

APPENDIX B

PROCESS ACTION TEAM (PAT) PARTICIPANTS

Darold L. Griffin	Executive Director/ U.S. Army (Lead) U.S. Army Materiel Command
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Paul Lyons	U.S. Air Force Materiel Command
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Carol Martin	Defense General Supply Center Defense Logistics Agency
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Jack Niles	Defense Logistics Agency
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CDR Ray Schaubel	Department of the Navy
Alvin Smith	Office of the Secretary of Defense Environmental Security

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TC John Holly - Training
TC Dennis Kerlin - Joint Staff Requirements
n Reinhart - Procurement
eg Saunders - Standardization Program Division
hn Smith - Acquisition Policy
ic Sylvester - Acquisition Policy

APPENDIX C

PREVIOUS STUDIES AND REPORTS

1977

Defense Science Board Report Of The Task Force On Specifications And Standards, The Director Of Defense Research and Engineering, April 1977

1984

An Assessment Of The U.S. Defense Standardization & Specification Program, R. B. Toth Associates, 1984

1987

Final Report Of The Defense Science Board 1986 Summer Study Use Of Commercial Components In Military Equipment, Co-chairmen Dr. James R. Burnett, Dr. William J. Perry, Office of the Under Secretary of Defense for Acquisition, January 1987

Specifications And Standards Acquisition Improvement Review (SAIR) Final Report, Teledyne Brown Engineering, October, 1987

1988

Enhancing Defense Standardization, Specifications And Standards: Cornerstone Of Quality. Report to the Secretary of Defense by the Under Secretary of Defense (Acquisition), November 1988

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APPENDIX D

ACRONYMS

A

ABC	Activity-Based Costing
ACAT	Acquisition Category
ACIM	Acquisition Corporate Information Management
ACQCOM	Acquisition Command
AE	Acquisition Executive
AIA	Aerospace Industries Association
AIRSTD	Air Standard
AIS	Automated Information System
AMC	U.S. Army Materiel Command
AMCMEA	U.S. Army Materiel Command Management Engineering Activity
ANSI	American National Standards Institute
AQL	Acceptable Quality Levels
ARL	Army Research Laboratories
ASD(C3I)	Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSETS	Acquisition Streamlining and Standardization Electronic Transfer System
ASSIST	Acquisition Streamlining and Standardization Information System
ASTM	American Society of Testing and Materials

B

BCP	Best Commercial Practice

C

CALS	Continuous Acquisition and Life Cycle Support
CASCO	ISO Council Committee on Conformity Assessment
CDA	Central Design Activity
CDRL	Contract Data Requirement List
CID	Commercial Item Description
CIM	Corporate Information Management

COTS	Commercial-off-the-shelf
CRADA	Cooperative Research and Development Agreement
CSIS	The Center for Strategic & International Studies

D

DA	Department of the Army
DASD(PR)	Deputy Assistant Under Secretary of Defense (Production Resources)
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DBOF	Defense Business Operating Fund
DCMC	Defense Contract Management Command
DDI	Director for Defense Information
DDN	Defense Data Network
DDR&E	Director, Defense Research and Engineering
DEM/VAL	Demonstration/Validation
DEPSECDEF	Deputy Secretary of Defense
DEPSO	Departmental Standardization Office
DFAR	Defense Federal Acquisition Regulation
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DIS	Distributed Interactive Simulation
DISA	Defense Information Systems Agency
DLA	Defense Logistics Agency
DOC	U.S. Department of Commerce
DoD	U.S. Department of Defense
DODI	Department of Defense Instruction
DODISS	DOD Index of Specifications and Standards
DODSSP	Department of Defense Single Stock Point
DON	Department of the Navy
DRPM	Directing Reporting Program Manager
DSB	Defense Science Board
DSIC	Defense Standards Improvement Council
DSMC	Defense Systems Management College
DSP	Defense Standardization Program
DTC	Design to Cost
DUSD(AR)	Deputy Under Secretary of Defense (Acquisition Reform)
DUSD(ES)	Deputy Under Secretary of Defense (Environmental Security)

E

ECO	Engineering Change Order
ECP	Engineering Change Proposal

EIA	Electronics Industries Association
EMD	Engineering and Manufacturing Development
EO	Executive Order
EPCRA	Emergency Planning and Community Right-to-Know Act

F

FAR	Federal Acquisition Regulation
FSC	Federal Supply Class

G

GAO	General Accounting Office
GSA	General Services Administration

H

HQ	Headquarters

I

IAC	International Advisory Committee of ANSI
IEC	International Electro Technical Committee
IEEE	Institute of Electrical and Electronics Engineers
IG	Inspector General
IGES	Initial Graphics Exchange Specification
IPD	Integrated Product Development
IPE	Industrial Plant Equipment
IPT	Integrated Product Team
IRM	Information Resources Management
ISA	International Standardization Agreement
ISO	International Organization for Standardization
ISONET	ISO Information Network

L

LCC	Life Cycle Cost
LSA	Lead Standardization Activity
LTPD	Lot Tolerance Percent Defective

M

MAS	Military Agency for Standardization

MDA	Milestone Decision Authority
MIL-HDBK	Military Handbook
MILSPECS	Military Specifications
MILSTDS	Military Standards
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSC	Major Subordinate Command

N

NCSCI	National Center for Standards and Certification Information
NDI	Nondevelopmental Item
NGCR	Next Generation Computer Resources
NGS	Non-Government Standard
NGSB	Non-Government Standard Body
NIAG	NATO Industrial Advisory Group
NISO	National Information Standards Organization
NIST	National Institute of Standards and Technology
NPODS(E)	Navy Publishing on Demand System (Enhanced)
NRE	Non-Recurring Expense
NSO	National Standardization Officer
NSSN	National Standards Systems Network

O

OASD(PR)	Office of the Assistant Secretary of Defense (Production Resources)
OEM	Original Equipment Manufacturer
O&M	Operations and Maintenance
OMB	Office of Management and Budget
OPE	Other Plant Equipment
OPM	Office of Personnel Management
OSD	Office of the Secretary of Defense
OSHA	Occupational Safety and Health Agency
OUSD	Office of the Under Secretary of Defense

P

PA	Preparing Activity
PAT	Process Action Team
PEM	Plastic Encapsulated Microcircuits
PEO	Program Executive Office
PDES	Product Data Exchange Using STEP
PM	Program Manager

POC	Point of Contact
POM	Program Objective Memorandum
PROC	Procurement

Q

QA	Quality Assurance
QC	Quality Control
QML	Qualified Manufacturers List
QPL	Qualified Product List

R

R&D	Research and Development
RDEC	Research and Development Engineering Center
RFQ	Request for Quotation
RFP	Request for Proposal

S

SAE	Service Acquisition Executive
SAE	Society of Automotive Engineers
SD	Standardization Directory
SDO	Standards Development Organization
SDSC	Standards and Data Services Committee
SE	Standardization Executive
SECDEF	Secretary of Defense
SGML	Standard Generalized Markup Language
SIE	Standards Improvement Executive
SMA	Standardization Management Activity
SMD	Standardized Military Drawing
SOP	Standard Operating Procedure
SOW	Statement of Work
SPO	System Program Office
ST	Special Tooling
STD	Standard
STE	Special Test Equipment
STEP	Standard for Exchange of Product Model Data

T

TA	Technical Advisor
TAG	Technical Advisory Group
TC	Technical Committee
TDP	Technical Data Package

TQL	Total Quality Leadership
TWG	Technical Working Group

U

USAF	United States Air Force
USD(A&T)	Under Secretary of Defense (Acquisition & Technology)
USN	United States Navy

V

VECP	Value Engineering Change Proposal

APPENDIX E

GLOSSARY OF TERMS

ACQUISITION. The acquiring by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy each agency, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.
(Code of Federal Regulations, '91)

ACQUISITION STREAMLINING. Streamlining of solicitations by waiving the use of certain regulations has also been used effectively, particularly by the Defense Fuels Supply Center (DFSC). For the last fourteen years, this center has utilized a deviation from certain provisions and clauses from the Federal Acquisition Regulation (FAR) and the Defense FAR Supplement in order to procure petroleum and coal. These deviations granted relief from cumbersome regulations which burdened the contractors into not wanting to deal with DoD. Solicitations were tailored to allow DFSC to participate in the fuels marketplace in much the same manner as the large private sector distributors. As a result of this streamlining, increased competition has fostered favorable prices.

BEST VALUE. The evaluation of a product, system, or service based on all reasonable factors including initial price, life cycle costs, available extended warranties, prior product experience, availability of distribution and service channels, past producer performance, past vendor performance, and so forth, for the purpose of procuring a product, system, or service that provides optimum satisfaction of the mission need.
['89 DSB Report (modified)]

CONCURRENT ENGINEERING. Concurrent engineering is a systematic approach to the integrated, concurrent design of products and their related processes, including manufacture and support. This approach is intended to cause the developers, from the outset, to consider all elements of the product life cycle from conception through disposal, including quality, cost, schedule, and user requirements.

CUSTOMER VALUE CONTRACTING. This practice, based upon multi-award contracts, provides the DoD customers with a choice of items from a "catalog" of product descriptions. All responsible offerors who meet the technical qualifications for the particular items are awarded indefinite delivery contracts. Customers are provided a catalog of the available products, and they make a value-based selection which meets their needs or requirements. Items are shipped directly from the vendor's facilities to the customer. The advantages are improved customer satisfaction based upon individual choice and quicker delivery as well as lower logistical costs in terms of carrying and handling charges associated with stock in the depots. This closely mirrors the direct order/drop ship method widely used by the commercial sector. Likewise, standard commercial warranties are sufficient to keep quality within acceptable limits.

DEPARTMENTAL STANDARDS IMPROVEMENT OFFICE (DEPSIO). A top level office in each Military Department or Defense Agency responsible for managing the Defense Specifications and Standards Program and ensuring that its Lead Standardization Activities and Standardization Management Activities properly implement the policies, procedures, and goals of the Defense Specifications and Standards Program.
(DOD 4120.3-M '93)

DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS). A publication that lists Federal and military specifications and standards, guide specifications, military handbooks and bulletins, commercial item descriptions, adopted non-government standards, and other related standardization documents used by the Department of Defense.
(DOD 4120.3-M, '93)

FEDERAL SUPPLY CLASS. A four-digit coding structure used to group products into logical families for supply management purposes. As used in the standards program, the two-digit code is used to group standardization documents associated with the Federal Supply Classes into logical families for standards management purposes.
(DOD 4120.3-M, '93)

FLOWDOWN. When a military specification or standard, or even a government-unique contractual requirement, is added to a prime contract, the prime contractor will often "flow down" that requirement to its subcontractors.
(Roadmap for MilSpec Reform, '93)

GUIDE SPECIFICATION. A document used to identify recurring requirements for types of systems, subsystems, equipment, or assemblies that must be determined and tailored for each acquisition before solicitation or contractor selection.
(DOD 4120.3-M, '93)

LEAD STANDARDIZATION ACTIVITY. A management activity in a Military Department or a Defense Agency that guides DOD standards efforts for a Federal Supply Group, a Federal Supply Class, or a standards area through the development of Standardization Program Plans, authorization of standardization projects, and identification and resolution of standards issues.
(DOD 4129.3-M, '93)

MILITARY SPECIFICATION. A military specification describes the essential technical requirements for purchased materiel that are military unique or are substantially modified commercial items.
(DOD 4120.3-M, '93)

MILITARY STANDARD. A military standard establishes uniform engineering and technical requirements for military unique or substantially modified commercial processes, procedures, practices, and methods.
(DOD 4120.3-M, '93)

NONDEVELOPMENTAL ITEM. Nondevelopmental items are those which may or may not require minor modification, are available in the commercial marketplace, or previously developed and in use by another federal agency, state, local government, or friendly foreign government.
('89 DSB Report)

NONGOVERNMENT STANDARD. A nongovernment standard is developed by a private sector association, organization, or technical society that plans, develops, establishes, or coordinates standards, specifications, handbooks, or related documents. This term does not include standards of individual companies.
(DOD 4120.3-M, '93)

PERFORMANCE SPECIFICATION. The performance specification addresses form fit, and function and leaves design solutions to the contractor's ingenuity, allowing greater flexibility in management, manufacturing and design with an end result of rapid insertion of new technology and producibility improvements.
(AMC-P 715-17, Jul '93)

PREPARING ACTIVITY. The DoD activity or the civilian agency responsible for the preparation, coordination, issuance, and maintenance of standardization documents.
(DOD 4120.3-M, '93)

PRIME VENDOR. In the case of pharmaceutical and medical/surgical supplies, the need for DoD to maintain and store inventories has been greatly reduced by having direct vendor deliveries of supplies from a distributor to a user. This program closely resembles the practices used by public hospitals and provides the individual health care facilities the flexibility to choose from commercially available products. The benefits of this program are: drastically reduced delivery times directly to the functional and/or dispensing units; reduced logistical costs in terms of decentralized distribution and centralized acquisition. All transactions utilize electronic data interchange.

QUALIFIED MANUFACTURERS LIST. This process was originally developed to meet the needs of DoD in the electronics arena to include electronic microcircuits components and devices. This is a type of manufacturing process quality control whereby manufacturer's processes and materials are certified without further inspections and government involvement once the certification process is completed. The benefit of QML is that the products are made by a carefully controlled process with appropriate statistical controls that are acceptable to both industry and DoD. Commercial and military items are produced on the same line without differentiation between the two. No changes in materials or processes are required.

SHARED PRODUCTION. This practice is currently being utilized within DoD to ensure readiness for certain types of replenishment items. An agreement is drawn up that allows DoD and a commercial counterpart to share a production facility. Employees are trained to produce items for the commercial as well as DoD. During peacetime, the two partners share the facility such that surges for either one are easily accommodated. However, the requirements for rapid mobilization or national emergency are covered in the agreement and can easily be handled by the previously established commercial practices and crosstrained workforce. This type of acquisition strategy is a good example of dual use industrial base application.

SPECIFICATION. A specification is prepared to support acquisition that describes the essential technical requirements for purchased materiel and the criteria for determining whether those requirements are met.
(DOD 4120.3-M, '93)

STANDARD. A standard that establishes uniform engineering and technical requirements for processes, procedures, practices, and methods. Standards may also establish requirements for selection, application, and design criteria of materiel.
(DOD 4120.3-M, '93)

TAILORING. The process of using common sense in the application of specifications and standards is called tailoring. In essence, this means using the specifications as a reasonable starting point, but modifying their applicability to suit the circumstances of a given program. Perhaps a better definition would be "stop treating the specifications as sacred." Tailoring should continue throughout the life of a program, from advanced development Request for Proposal preparation, through engineering development, production, and deployment. Tailoring requires management and technical judgment on the part of both Government and industry personnel.
('77 Shea Report)

APPENDIX F

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APPENDIX G

SUMMARY OF BRIEFINGS TO PROCESS ACTION TEAM

1. Qualified Manufacturers List (QML), presented by Mr. Darrell Hill, Chief, Qualifications Division, Defense Electronics Supply Center, 31 Aug 93

- Rapid insertion of new technologies
- Use best commercial practices
- Structure program around how "World Class" suppliers do business
- Survey "Commercial/Industrial" sectors
- Partnership with industry
  - •• Buy-in required
  - •• Must maintain viable supplier base to meet mil application needs
- Only available system to achieve BCP
- Use best commercial practices commensurate with military performance, quality, and reliability
- The QML approach is basically a validation that the company is well managed and technically sound enough to be "World Class" with minimum government interference
- QML leverages on the fact that many U.S. microcircuit manufacturers now understand it is in their best interest to produce quality products through process controls and continuous improvement
- Lower cost will be achieved by elimination of "non value added" testing

2. ADP Systems Supporting Specifications, Standards, and Technical Data, presented by Mr. Jim Chamblee, HQ AMC, 31 Aug 93

- Existing Systems
  - •• Specs & Standards
    -Assist-Indexed DODISS retrieval Army/Navy mail access only
  - •• Technical Data
    -Optical disk repositories-DSREDS (Army), EDCARS (AF), EDMICS (Navy)
    -Config. Mgt. Systems-TD/CMS & CLIP
    -Next generation engineering data manual
    -NIST STD Tech data package project
    -PDES/STEP
- Statement of work
  - •• LOGPARS (ILS)
  - •• SCOPE (HUMAN ENGR.)

- •• SARG prototype
- Process improvements
  - •• AR/AMC/Navy system-reduced PALT time dramatically
- Commercial systems
  - •• Internet
  - •• IEEE
  - •• ANSI-SDSC/X3/T1

3. Presentation by Mr. Robert Noth, John Deere & Company, 1 Sep 93.

- "Standardization" to achieve the maximum material standardization
- Advocates of benchmarking, and managing process not outputs
- Empowerment with metrics
  - •• Multi-disciplined integrated engineering teams responsibility for products
  - •• Customer satisfaction primary goal
  - •• Written company business plan strategies
- Company specifications and standards are used for world-wide market
- Standards include safety, over-the-road travel, laws and European community directives, 1974 US Metric Policy and computer aided design system
- Deere uses "Version" drawing to control interchangeagility
- Buying to performance specifications more and more
- Concurrent Engineering teaming including suppliers
- Described life cycle product delivery process
- Total involvement of all functional areas

4. New Ways of Doing Business, presented by Hal Halvorsen, Director of Technical Operations, Defense General Supply Center, 1 Sep 93.

- Advocates generic specifications, not how-to
- Converting many specifications/standards to commercial item descriptions
- Allowing the "customer" choice in selecting items (i.e., quality is user's call)

5. F-22 Requirements Development Process, presented by: Mr. Rick Abell, Technical Director, F-22 System Program Office, 1 Sep 83

- Application of Mil-prime
  - •• Mil-prime guide (performance) specs served as foundation for ATF weapon system specification development
  - •• Contractors employed Mil-prime in developing subsystem level specs
  - •• Verification requirements development initiated in concert with contractors during DEM/VAL
  - •• Contractors included verification requirements in subsystem specs submitted as part of their proposal
  - •• Subsystem performance and verification requirements refined through

source Critical Review/Design Review process
    - Final section 3 & 4 requirements placed on contract
- Ownership of performance and verification requirements resides with Integrated Product Teams
- Reconciliation is an integral part of specification requirements compliance reviews and functional configuration audits

6. Acquisition Streamlining and Standardization Information System (ASSIST), presented by Mr. Steve Hoffinger, Universal Systems Inc., 2 Sep 93

- ASSIST overview and capabilities
    - Support for the overage document review process
    - Verifies currency of documents to be cited in RFP, SOW, and System Specifications
    - Comprehensive list of documents to be invoked in a given acquisition
    - Identifies documents that include data requirements (DIDS)
    - Identifies canceled documents cited in documents
    - Provides various reports
        - Reference list report that identifies all unique referenced by primary document to desired reference tier
        - Keyword report
        - Reference by other documents report that identifies all documents that use the primary document as a reference

7. Briefing on the Internet and the Internet Engineering Task Force, presented by Steve Coya of the Internet Society, 8 Sep 93

- Internet Worldwide Computer Network
- Internet Society, Internet Engineering Steering Group, Internet Engineering Task Force (IETF)
- IETF Standards Development Processes
    - Internet Drafts
    - Proposed Standards and requests for comments
    - Draft Standard
    - Standard
- Internal Standards Servers
- Universal Resource Information Locators

8. Milspec Reform Applied to Semiconductor Industry, presented by Mr. T. S. (Stoney) Edwards, Managing Director, Government Technology Business Unit, National Semiconductor, 9 Sep 93

- National Semiconductor strongly supports common utilization of commercial and gov't resources for maximum Return On Investment (ROI)

- Negotiate with ISO and EIA for QML to become a joint Mil and commercial STD, and allow DESC to administer in partnership with EIA, SIA, ETC
- Allow different finished part specs for industrial; Mil, automotive, Telecom, ETC Mil I/Cs are built on commercial lines today
- Potential I/C infrastructure savings would be more than overwhelmed by additional OEM and service logistics costs
- Military capable product will cost 3-5 times more than Standard Military Drawings (SMDs) if the infrastructure is destroyed
- OEMs will be "On their own" through 3rd parties who do not have the test infrastructure for today's sophisticated parts
- 883C/SMD is the major STD today @ 80%, 883C is performance spec
- SMDs must remain Mil for finished product
- Reward OEMs for SMD's elimination of nonvalue added bureaucratic Mil/Specs and accounting practices
- If the infrastructure goes away, it will never return
- DoD should drive QML and 883 with SMDs
- Allow QML to become the common commercial and Mil STD
- A "Buy commercial first" directive would be a disaster for OEM's, the I/C companies, and the service logistics commands
- DoD should eliminate all cost and pricing data requirements on semiconductor purchases

9. Comparison of Military and Development and Production, presented by Mr. James R. Nelson, Manager, Engine Product Assurance, General Electric Aircraft Engines, 10 Sep 93

- Cost savings to Government/Contractors can be achieved by reduced surveillance, proposals, audits and contract negotiations
- Delete most data requirements
- Continue emphasis on streamlining concepts
- Simplified requirements
- Produce government and commercial on same line
- GE writes its own specifications to toughest customer requirements

10. Single Process Factory Initiative, presented by Greg Saunders, OASD(P&L), 10 Sep 93

- "DoD and GE Aerospace working together"
- Continuing problem of multiple SPECS/STDS on same or similar processes
- DLA/GE must initially agree on single process STDS
- GE will guarantee form, fit, function
- GE will guarantee maintainability & reliability
- GE will waive "Single Process" implementation costs
- GE will pilot test "Single Process" approach at two electronic centers
- DLA and GE will jointly evaluate SPFI's technical results and effectiveness

11. American National Standards Institute (ANSI)/International Standards Process Improvement, presented by Mr. Greg Saunders, OASD(P&L), 10 Sep 93.

- 1993-recommend/1994 adopt-establish
  - •• Common markup language
  - •• Standard organizational format
  - •• Hardware software independent non-text formats
- Technology reinvestment project
  - •• To strengthen the industrial base by various means
  - •• Use what's there, don't duplicate, don't clash
  - •• Match-defense dual use assistance, match is 50%, 60%, 70% from non-defense sources
  - •• Others, match is 50% from federal sources
  - •• 50% of match must be in CAHS when $1 million of federal funds per/yr are requested
  - •• Terms of award: Initial 1 yr, increments of 1 yr

12. Process Oriented Contract Administration Services (PROCAS) Awareness Briefing, presented by Sidney Pope, Defense Contract Management Command, 10 Sep 93

- Performance based management philosophy
- Evolution from functional orientation to process orientation
- Process to ensure successful completion of contracts
- Founded on professional government-industry teamwork
- Promotes consistent treatment of contractors
- Method for continuous verifiable improvement

13. Acquisition Law Advisory Panel "800 Panel" Status Report, presented by Mr. Bruce E. Sullivan, Procurement Analyst, Office of the Assistant Secretary of the Army (RDA), 21 Sep 93

- Delivered to congress Jan 93
  (Not official position of DoD)
  (Part of National Performance Review)
- Panel looked at 900 statutes
  Recommended repeal/consolidation of 300
  Streamline 600
- Two main areas of interest
  Chapter 4 (Socioeconomic legislation; simplified acquisition)
  Chapter 8 (Commercial Items)
  -Integrate commercial and defense industrie (where can be done and where makes sense)
  -Creates new section on procurement of commercial items (CICA - Section 2301 - mandates use of commercial items to maximum extent possible)

-Makes recommendation to allow contractors to use generally accepted accounting standards
(OSD position is for full exemption to TINA and CAS for commercial items)

14. Comparison of Commercial and DOD Aircraft Procurement Terms and Conditions, presented by COL Larry Trowell & COL Bob Shipmac, Office of Contracting Policy, U.S. Air Force, 21 Sep 93

- Compare the terms and conditions contained in commercial and DoD aircraft contracts
- Divide all contract clauses into three categories
  - Common subject areas
  - Commercial peculiar clauses
  - DoD peculiar clauses
- Cannot generalize findings to all commercial or DoD contracts
- Commercial and DoD contract perspectives differ
- Commercial contracts allow seller to make certain changes without buyer approval
- Commercial contracts allow inspection beginning 12 months prior to delivery
- Commercial contracts require periodic payments
- Commercial contracts provide only limited buyer rights to terminate
- DoD contracts provide greater buyer rights to terminate
- Commercial contracts place risk of loss with seller until title passes at delivery
- All contracts have warranty coverage for material and workmanship and design
- No single "Commercial" model
- Each business deal must be tailored to item/market conditions/common trade practice
- Will require more extensive analysis of risks and rights
- Will require a major culture change

15. MIL-STD-499B, Systems Engineering, presented by MAJ James K. March, HQ, Air Force Materiel Command, 21 Sep 93

- Provides a full implementation of Systems Engineering not simply "System-Level Engineering"
- Requires System development in the context of the System Life Cycle
- Performance oriented, progressive verification, and increased customer role with Services and industry involved from the beginning

16. Roundtable discussions with Eli H. Lesser, Director, EIA Quality Systems Engineering Department, Electronic Industries Association, 29 Sep 93

- Support the DoD Specifications and Standards Process Action Team review
- Recommends 200 military specifications to be eliminated/replaced
- Suggests that implementation of reforms will be difficult, but is a key part of the

initiative
- Supports the idea of DoD becoming a certifying body

17. ISO 9000 and the Defense Industry, presented by Ira J. Epstein, Vice President, Government Services, STAT-A-MATRIX, 30 Sep 93

- ISO standards are the highest level of non-government standards
- ISO standards are world-wide benchmarks US industry is adopting ISO to allow world wide sourcing
- Adoption is necessary to remain competitive
- US defense industry is burdened by two quality STDS-Mil-Q-9858 and ISO
- Superseding 9858 with ISO would eliminate redundant cost and make defense industry more competitive
- Both ISO 9000 and 9858 are weak in continuous process improvement
- NATO has decided to adopt the ISO 9000 STDS with reservations
- Mar 1993 DoD position "We suggest prudent use of these STDS" and "Proceed with caution"
- Certification not critical to adoption and use
- DFARS commercial Procurement Section requires use of commercial quality standards

18. Conference Call with Mr. Jack Ingold, National Manager, Sears Buying Service, 1 Oct 93

- Develops long-term contractual relationships with suppliers using performance and usability terms
- Does provide some oversight at manufacturer's plants but not on continuous basis
- Utilizes source partnership for parts. Sears technician works with source to determine what parts are needed and required inventory
- Normally has rights to source suppliers' technical data packages

19. DCMC Organization and Functions Meeting with Jeffrey Allan, Chief, Product Design, Development, & Control, Defense Contract Management Command, 5 Oct 93

- Mission
  - Ensure contractor compliance with cost, delivery, technical, quality and other contract terms
  - Accept products on behalf of the Government
  - Provide program management support
  - Ensure the contractor is paid
- Business philosophy is "Stay on the road to process improvement"

20. Roundtable discussions with Mr. Frederick W. Kern, Technical Engineer, Technical Standards Division, Society of Automotive Engineers (SAE) and Mr. David R. Bradley,

Manager, Technical Committee Operations, American Society for Testing and Materials (ASTM), 5 Oct 93

- SAE
  - •• NGS Facilitates cooperative research
  - •• Independent, unbiased, non-profit technical organization
  - •• Major developer of standards concerned with the safety and design of self-propelled vehicles
  - •• Government personnel must participate or it looks like dumping on committees who have other work
- ASTM
  - •• Not-for-profit organization to write STDS for materials, products, systems, and services
  - •• Publishes STD test methods, specifications, practices guides, classification, and terminology
  - •• ASTM's STD development activities encompass metals, paints, plastics, textiles, petroleum, construction, energy, the environment, consumer products, medical services/devices, computerized systems, and electronics
- ASTM/SAE believe they can cover all materials except energetics
- ASTM/SAE do not support DoD becoming National Standards body

21. Roundtable discussion with Mr. Manual Gutierrez, American Society of Mechanical Engineers, 6 Oct 93

- Purpose is to promote the art, science, and practice of mechanical engineering and the allied arts and sciences through research, education and interaction
- Provides codes, standards, accreditation and certifications programs
- Supporter of ISO 9000 and is a Registered Supplier

22. Briefings by Mr. Stan Siegal and Mr. Malt Maltagliati, Aerospace Industries Association (AIA) and Mr. Andrew Salem, Institute of Electrical & Electronic Engineers (IEEE), 7 Oct 93

- Many Mil SPECS/STDS, particularly those for components, projects, and end-items services, have become defacto commercial. Those should be protected
- Many SPECS and STDS are merely descriptions of best commercial practices
- A relative minority of Mil SPECS/STDS not only specify "How - to", but require apparently useless activity
- Tailoring is absolutely essential

23. ABC Accounting Recommendations Presentation by Mr. Alfred M. King, Valuation Research Corporation, 14 Oct 93
- ABC is a new method of cost accounting
- ABC used extensively in private sector

- Provides better cost info
  - •• Identifies overhead with specific activities
  - •• Does not spread overhead evenly
- Determines product costs, cost of complying with DoD requirements and cost of capacity
- Recommendations
  - •• Permit, not require contractors to adopt ABC
  - •• Get gov't out of the business of supplying GFE and GFM
  - •• Permit contractors to adopt ABC without it being a change in accounting
  - •• Using ABC, identify and segregate cost of DoD requirements
  - •• Let contractors use ABC on new contracts

24. Briefing on the Affordable Aircraft Study (A3S) by Mr. R. Murphy, DoD Advanced Research Projects Agency, 19 Oct 93.

- Suggest ways to reduce program acquisition costs by 50 percent;
- Describe/define cost drivers of the current defense material process;
- Suggest technologies, processes, products, and technologies which will reduce costs;
  - •• Technologies can reduce aircraft costs but quantification is difficult because knowledge base is incomplete
  - •• Tools are being developed and used
    - Maturation and verificaiton must be accomplished
    - Information infrastructure is required (Acquisition C2)
  - •• Innovative A3 programs can help develop processes, tools, and metrics needed to achieve cost reduction
- Cost drivers;
  - Requirements generated independent of cost
  - Lack of stability
  - Use of immature technologies and processes
  - Risk averse culture (issue is public trust)
  - Dependence on regulation and inspection rather than performance
  - Excessive oversight (audits, decision points)
  - Lengthy acquisition cycle
    (Cost = people * times * overhead)
- A 50% or more reduction in acquisition cost is possible through the combined use of:
  - Tailored contracts (both primes and subs)
  - Use of mature technologies and processes
  - Use of modeling and simulation
  - IPPD
  - Best practices
  - Streamlined decision making
- No one tool applied separately can accomplish the desired cost reductions

- An integrated approach is essential

25. Open Standard Electronic Modules Briefing, presented by Mr. Albert Marcantonio, Raytheon, also attended by Mr. Stephen Springer, Motorola Semiconductor Products, Inc.; Mr. Jack Delaney & Mr. Domenic Liberatore, Raytheon Company, 21 Oct 93.

- Today's environment has systems being developed with a large number of commercial standards without any level of commonality
- DoD Program Managers have not been able to leverage commercial technology and gain the benefits of Open System Architecture
- Open Systems provide minimal DoD investment, has limited risk, and provides equipment cost savings
- Open standards are the way of the future for both commercial industry and the DoD
- Requiring the use of open systems and commonality will reduce NRE as well as production costs
- Industry realizes and is willing to invest in the development of product as long as the set of standards remain constant
- System upgrades planned for at the inception of development can be implemented in a timely and cost effective manner
- The goals of NGCR are realistic and required if DoD wants a focused implementation of open standards
- To gain the benefits of OSA the DoD must change its procurement policy or industry will not support it

26. Briefing on Lotus Notes Software by Leslie Ruzze, Information Systems and Services, Inc., 2 Nov 93

- ISSI capabilities
- Lotus Notes Capabilities
  - Multimedia Documents
  - E-Mail
  - Security Features
  - Internet Gateways
  - Database Interfaces
  - External Software Interfaces
  - Document Coordination
  - Electronic Signature
  - Standards Supported or Not supported
- Lotus Notes Demonstration

APPENDIX H

POLICY ISSUES/SOURCE DOCUMENTS

Performance Specifications

RECOMMENDATION: **All ACAT Programs for new systems, major modifications, technology generation changes, nondevelopmental items, and commercial items shall state needs in terms of performance specifications.**

Task 1: DepSecDef policy memorandum requiring the use of performance-based specifications for all ACAT Programs. Any deviation from this must be authorized by the Milestone Decision Authority. Approval of waivers for equipment already in the inventory is not required.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: PERFORMANCE SPECIFICATIONS, page H-3

Responsibility: The Assistant Secretary of Defense (Production Resources) will be the primary office of responsibility to prepare and staff the memorandum.

Task 2: Acquisition Policy. Revise DoD 5000.2 as follows:

- Add to para 2a(1) of Part 10 Section C, "Acquisition Streamlining":

  "The government should only maintain configuration control of the functional and performance requirements. The government can accept control of the allocated and product baselines subsequent to the functional configuration audit," if approved in the Acquisition Strategy Report.

- Add to para 3e of Part 9 Section A, "Configuration Management":

  "When product configuration control below the functional level is maintained by the contractor during the production/sustainment phases, requirements must be placed on the contract which define performance and design parameters that must not be changed to avoid adverse impact on logistics, operations, or competition."

- Delete para 3C of Part 6 Section R, "DoD Parts Control Program" and substitute:

  "3C Reprocurement: The parts control program will be applied to reprocurements of any repairable items which are defined by performance specifications. Multiple-set repair parts for performance-based specifications should be avoided if an adverse impact upon logistics is demonstrated. The parts control program will be considered for application to any other type item for which the acquiring DoD component anticipates life cycle cost savings."

Responsibility: Office of primary responsibility will be the System Program Manager.

Task 3: Military Specifications and Standards.

- Revise Military Standards 490, 961, and 962 to place a greater emphasis on the requirement to develop performance-based specifications. Highlight the benefits of performance-based specifications and reference available guidelines, e.g., AMC-P 715-17, "Guide for the Preparation and Use of Performance Specifications."

Responsibility: The office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary (Production Resources).

- Issue policy guidance and revise MIL-STD-490A, 5.3.4 Section 4, and MIL-STD-961C, 4.1.1 Section 4, to establish contractor responsibility for quality and compliance to performance specifications substantially as follows:

  "Quality Assurance requirements delineated in performance-based specifications shall be the responsibility of the contractor, unless otherwise stated in the contract. The contractor shall certify to the government that the item or items offered for acceptance and delivery satisfy the requirements of the specifications through process controls and inspections. Process controls are the preferred method for contractor quality assurance. The government, at its discretion, may witness such contractor process controls or inspections and provide notification of such intent to the contractor."

Responsibility: The office of primary responsibility to issue policy guidance and staff the revisions is the DASD(PR) Standardization Program Division.

- Release and widely publicize the US Army Materiel Command "Guide for the Preparation and Use of Performance Specifications" as a best-practice supplements.

Responsibility: Defense Standards Improvement Council.

DRAFT MEMORANDUM

MEMORANDUM FOR Under Secretary of Defense (Acquisition & Technology)
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force

SUBJECT: Performance-Based Specifications

1. Historically, we have used military unique specifications and standards to describe in detail not only end products but also specific manufacturing processes, materials, and testing to successfully deliver a product. This may ensure a quality product with low risk for the Government, but it may do so at a cost premium.

2. A viable solution is to employ the use of performance-based specifications when describing military products. This not only results in significant cost savings, but also provides greater opportunities for acquiring commercial and nondevelopmental items, promotes insertion of new technology, and reduces government oversight.

3. In this regard, performance-based specifications will be used when purchasing new systems, major modifications, technology generation changes, nondevelopmental, and commercial items. Because there will be cases when military specifications and standards that define an exact design solution are needed, the Milestone Decision Authority (MDA) is authorized to approve exemptions to this policy.

4. This policy applies to all ACAT Programs, defined in paragraph 3. Waivers for items already in the equipment inventory are not required. For ships with nuclear propulsion plants, the Director, Naval Nuclear Propulsion will determine the specifications and standards to be used.

Signature Block

ATTACHMENT

Management and Manufacturing Standards

RECOMMENDATION: Direct that manufacturing and management standards be canceled or converted to performance or nongovernment standards.

Task 1: Guidance policy. DepSecDef issues a policy memorandum directing that contractors be given the option of complying with cited military standards or proposing relevant non-government standards or industry practices which "meet the intent" of specifications and standards. Negotiated requirements become contractually binding. This policy should be promulgated by the Acquisition Executives, through the Program Executives, to all Program Managers.

SEE ATTACHMENT 1, DRAFT MEMORANDUM SUBJECT: APPLICATION OF STANDARDS, page H-6

Task 2: DoDI 5000.2 Revision. The DoDI 5000.2 should be revised such that all references to the management and manufacturing standards are revised so that the contractor is to "meet the intent" of the referenced standards and that other nongovernment standards which meet the intent of the military standards are acceptable.

Responsibility: The office of primary responsibility for Tasks 1 and 2 is the Deputy Assistant Secretary of Defense (Production Resources).

SEE ATTACHMENT 2, SUBJECT: MANAGEMENT AND MANUFACTURING SPECIFICATIONS AND STANDARDS REFERENCED IN DoDI 5000.2 AND THEIR REVISIONS, pages H-7 TO H-19

Task 3: Conversion of Standards. Attachment 2 provides examples of management and manufacturing standards that industry has identified as being the most significant barriers to commercial processes, as well as the real cost drivers. These standards must be reviewed with the goal to: cancel or inactivate for new design, convert to nongovernment standards, or convert to performance-based specifications. Standards projects will be initiated immediately for the most troublesome standards. Progress should be reviewed by the Defense Standards Improvement Council. The Army guide, "Functional Support Templates, Guide for Determining Functional Support Requirements for Acquisition Programs," will be provided as a best practice.

SEE ATTACHMENT 3 WITH ENCLOSURE, DRAFT MEMORANDUM SUBJECT: MANAGEMENT AND MANUFACTURING STANDARDS REQUIRING PRIORITY ACTION, AND ENCLOSURE, pages H-20 to H-24

Responsibility: The office of primary responsibility for approving Attachment 3 and directing action is the Deputy Assistant Secretary of Defense (Production Resources). Directives will be sent through the Service Acquisition Executives to the Service/Agency Standards Improvement Offices.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director Defense Logistics Agency

SUBJECT: Application of Standards

1. Department of Defense Instruction 5000.2, Part 6, Section 1, Para 2.1, states that:

> "The military standards and handbooks listed in this Instruction define a set of recommended processes and criteria for achieving program requirements. Each program manager is responsible for understanding the intent of these documents and tailoring their application as appropriate to meet program needs."

2. I would like to emphasize that the use of management and manufacturing standards listed in this Instruction is not mandatory. They are tools available to the program manager and should be viewed as guidance documents. Nongovernment standards and industry practices that "meet the intent" of the military standard are the preferred alternatives.

3. I ask each of you to structure your acquisition programs to minimize the use of these military standards as contract requirements.

Signature Block

ATTACHMENT 1

Management and Manufacturing Specifications and Standards

Referenced in DoDI 5000.2 and Their Proposed Revisions

• Reference 1
MIL-STD-499, "Engineering Management"

Part 6, Section A, Procedure 3.a:
"An effective systems engineering management program will be implemented for each acquisition program. Recommended procedures are contained in MIL-STD-499 (reference (a))."

No change recommended.

• Reference 2
MIL-STD-1388, "Logistics Support Analysis"
MIL-STD-1528, "Manufacturing Management Program"
DoD-STD-2167, "Defense System Software Development"
MIL-H-46855, "Human Engineering Requirements for Military Systems, Equipment, and Facilities"

Part 6, Section A, Procedure 3.a.(1):
From:
"The technical processes identified in MIL-STD-1388, MIL-STD-1528, DoD-STD-2167, and MIL-H-46855 (references (b) through (e)) are major elements of the technical development process and will be integrated into a comprehensive system development effort."

To:
"The technical processes identified in MIL-STD-1388, MIL-STD-1528, DoD-STD-2167, and MIL-H-46855 (references (b) through (e)) represent the sum of disciplines involved in the technical development process. The contractor is to 'meet the intent' of these standards in the development of a comprehensive system development effort."

ATTACHMENT 2

• Reference 3
MIL-STD-1521, "Technical Reviews and Audits for Systems, Equipments, and Computer Programs"

Part 6, Section A, Procedure 3.a.(2):
"Recommended review procedures are contained in MIL-STD-1521 (reference (f)).

No change recommended.

• Reference 4
Part 6, Section A, Table of Technical Discipline References
At top of Table insert: "The contractor is to 'meet the intent' of the documents listed below. These documents will be tailored to meet the needs of the program and use of commercial equivalents is encouraged."

• Reference 5
MIL-STD-881, "Work Breakdown Structures for Defense Materiel Items"

Part 6, Section B, Procedure 3.a.(1)(a):
From:
"MIL-STD-881 (reference (b)) defines the top three levels of work breakdown structure for seven categories of defense systems: aircraft, electronics, missiles, ordnance, ships, space systems, and surface vehicles."

To:
"MIL-STD-881 (reference (b)) provides samples for the top three levels of work breakdown structure for seven categories of defense systems: aircraft, electronics, missiles, ordnance, ships, space systems, and surface vehicles."

• Reference 6
Part 6, Section B, Paragraph 3.a.(1)(b):
From:
"Extensions of the work breakdown structure will be consistent with MIL-STD-881 (reference (b)) but tailored to the specific program."

To:
"Extensions of the work breakdown structure will be consistent with the intent of MIL-STD-881 (reference (b)) and tailored to the specific program."

• Reference 7
Part 6, Section B, Procedure 3.b:
From:
"The contract work breakdown structure will be extended to lower levels by the contractor in accordance with MIL-STD-881 (reference (b))."

To:
"The contract work breakdown structure will be extended to lower levels by the contractor so that the intent of MIL-STD-881 (reference (b)) is met."

• Reference 8
Part 6, Section B, Paragraph 3.c.(1):
From:
"Integrated logistics support will be accommodated in the appropriate levels of the work breakdown structure in accordance with MIL-STD-881 (reference (b))."

To:
"Integrated logistics support will be accommodated in the appropriate levels of the work breakdown structure to meet the intent of MIL-STD-881 (reference (b)) as a guide."

• Reference 9
Part 6, Section B, Procedure 3.c.(2):
From:
"Software will be accommodated in the appropriate levels of the work breakdown structure in accordance with MIL-STD-881 (reference (b))."

To:
"Software will be accommodated in the appropriate levels of the work breakdown structure to meet the intent of MIL-STD-881 (reference (b)) as a guide."

• Reference 10
MIL-STD-470, "Maintainability Program for Systems and Equipment"
MIL-STD-785, "Reliability Program for Systems and Equipment"

Part 6, Section C, Procedure 3.i:
"Additional guidance is contained in MIL-STD-470 and MIL-STD-785 (references (e) and (f)). A representative list of reliability and maintainability considerations to be addressed at each milestone decision point is at attachment 1."

No change recommended.

• Reference 11
DoD-STD-2167, "Defense System Software Development"
DoD-STD-2168, "Defense System Software Quality Program"

Part 6, Section D, Procedure 3.b., paragraph 5(b):
From:
"DoD-STD-2167 and DoD-STD-2168 (references (g) and (h)) will be applied to the development of all deliverable software. These standards should be tailored to the application."

To:
"The contractor will meet the intent of DoD-STD-2167 and DoD-STD-2168 (references (g) and (h)) will be used as guides in the development of all deliverable software. These standards should be tailored to the application. The use of nongovernment standards which meet or exceed the intent of these military standards is encouraged."

• Reference 12
DoD-STD-1467, "Software Support Environment"
MIL-STD-1801, "User-Computer Interface"
MIL-STD-882, "System Safety Program Requirements"

Part 6, Section D, Procedure 3.h:
"Additional guidance is contained in DoD Directive 3405.1, "Computer Programming Language Policy," MIL-STD-1815, DoD-STD-1467, MIL-STD-1801, and MIL-STD-882 (references (k) through (o))."

No change recommended.

• Reference 13
DoD-STD-2167, "Defense System Software Development"

Part 6, Section D, Attachment 1. paragraph 1.a:
From:
"These processes, including corporate policies, practices, and standards, must be defined in the software development plan required by DoD-STD-2167 (reference (g))."

To:
"These processes, including corporate policies, practices, and standards, must be defined in the software development plan which meets the intent of DoD-STD-2167 (reference (g))."

• Reference 14
Part 6, Section D, Attachment 1, paragraph 1.b:
From:
"Specific practices that should be used are: (1) Establishment of a software process maturity model and process improvement plan; (2) Rigorous configuration control and quality assurance as required by DoD-STD-2168 (reference (h)); or (3) Used for research and development of weapon systems."

To:
"Specific practices that should be used are: (1) Establishment of a software process maturity model and process improvement plan; (2) Rigorous configuration control and quality assurance which meets the intent of DoD-STD-2168 (reference (h)); or (3) Used for research and development of weapon systems."

• Reference 15
DoD-STD-2167, "Defense System Software Development"
MIL-STD-882, "System Safety Program Requirements"

Part 6, Section D, Attachment 1, paragraph 2.b:
From:
"Software system safety techniques, analyses, and approaches described in MIL-STD-882 (reference (o)) should be used to ensure the system safety process supports the DoD-STD-2167 (reference (g)) software development process (see Section 6)."

To:
"Software system safety techniques, analyses, and approaches which meet the intent of MIL-STD-882 (reference (o)) should be used as guidance to ensure the system safety process supports the intent of DoD-STD-2167 (reference (g)) software development process guidance (see Section 6)."

• Reference 16
MIL-STD-1799, "Survivability, Aeronautical Systems (for Combat Effectiveness)"
MIL-STD-2069, "Requirements for Aircraft Non-Nuclear Survivability"
DoD-STD-2169, "Military Standard High-Altitude Electromagnetic Pulse (HEMP) Environment"

Part 6, Section F, Procedure 3.g.(2):
"Additional guidance is contained in DoD Directive 3150.3, "Survivability of Non-Strategic Nuclear Forces (NSNF)"; DoD Directive 5160.5, "Responsibilities for Research, Development, and Acquisition of Chemical Weapons and Chemical and Biological Defense"; MIL-STD-1799; MIL-STD-2069; DoD-STD-2169; and MIL-HDBK-336 (references (h) through (m))."

No change recommended.

• Reference 17
MIL-STD-461, "Electromagnetic Emissions and Susceptibility Requirements for the Control of Electromagnetic Interference"
MIL-E-6051, "Electromagnetic Compatibility Requirements, Systems"

Part 6, Section G, Procedure 3.a.(1):
"Satisfy the appropriate requirements of MIL-STD-461 (reference (a)). Acquisition programs may vary the requirements upon demonstrated evidence that changing these requirements will not cause their system or other systems to fail due to electromagnetic interference in any of its anticipated operating environment."

No change recommended.

• Reference 18
MIL-E-6051, "Electromagnetic Compatibility Requirements, Systems"
MIL-HDBK-237, "Electromagnetic Compatibility Management Guide for Platforms, Systems, and Equipments"

Part 6, Section G, Procedure 3.a.(2):
"Establish a comprehensive design, analysis, and verification process to develop a system which can successfully operate within its expected environments. MIL-E-6051 and MIL-HDBK-237 (references (b) and (c)) establish recommended procedures."

No change recommended.

• Reference 19
MIL-H-46855, "Human Engineering Requirements for Military Systems, Equipment, and Facilities"
MIL-STD-1800, "Human Factors Engineering Performance Requirements for Systems"
MIL-STD-1472, "Human Engineering Design Criteria for Military Systems, Equipment, and Facilities"
DoD-HDBK-763, "Human Engineering Procedures Guide"
MIL-STD-1801, "User-Computer Interface"

Part 6, Section H, Procedure 3.a:
"A human factors engineering program will be established for each system acquisition through the tailored application of MIL-H-46855 or MIL-STD-1800 (references (a) and (b)), adapted to specific program characteristics. MIL-STD-1472 and DoD-HDBK-763 (references (c) and (d)) should be used as the basis for human factors design. Additional guidance is found in MIL-STD-1801 (reference (e))."

No change recommended.

• Reference 20
Part 6, Section H, Procedure 3.a.(3):
"MIL-STD-1472 (reference (c)) will be part of the selection criteria for determining the suitability of nondevelopmental items."

No change recommended.

• Reference 21
MIL-STD-882, "System Safety Program Requirements"

Part 6, Section I, Policy 2, paragraph d:
"Each management decision to accept the risks associated with an identified hazard shall be formally documented using MIL-STD-882 (reference (d)) as a guide to establish criteria for defining and categorizing 'high' and 'serious' risks."

No change recommended.

• Reference 22
Part 6, Section I, Procedure 3.a:
"A system safety program that identifies, evaluates, and eliminates or controls system hazards will be established through the tailored application of MIL-STD-882 (reference (d)), adapted to specific program characteristics."

No change recommended.

• Reference 23
MIL-STD-1785, "System Security Program Management Requirements"

Part 6, Section J, Procedure 3.a:
"A system security engineering management program will be established through the tailored application of MIL-STD-1785 (reference (a)), adapted to specific program characteristics. The system security engineering application will be based on the system's politico-military value, limited number, or cost.

No change recommended.

• Reference 24
MIL-STD-337, "Design to Cost"

Part 6, Section K, Procedure 3.e:
"Additional guidance is contained in MIL-STD-337 (reference (c))."

No change recommended.

• Reference 25
MIL-STD-1840, "Automated Interchange of Technical Information"

Part 6, Section N, Paragraph 3.a.(3):
From:
"Delivery of technical information in digital form using computer aided acquisition and logistics support standards contained in MIL-STD-1840 (reference (b))."

To:
"Delivery of technical information in digital form using computer aided acquisition and logistics support standards which meet the intent of MIL-STD-1840 (reference (b))".

• Reference 26
Part 6, Section N, Paragraph 3.f.(2):
From:
"The computer aided acquisition and logistics support standards in MIL-STD-1840 (reference (b)) will be applied for digital data deliverables."

To:
"Digital data deliverables shall meet the intent of computer aided acquisition and logistics support standards in MIL-STD-1840 (reference (b)) Use of commercial standards which meet the intent of MIL-STD-1840 are encouraged."

• Reference 27
MIL-STD-1528, "Manufacturing Management Program"

Part 6, Section O, Procedure 3.a.(1). (b):
"MIL-STD-1528 (reference (h)) establishes recommended procedures for conducting manufacturing engineering and producibility efforts."

No change recommended.

• Reference 28
Part 6, Section O, Procedure 3.c.(3):
"Tailored application of MIL-STD-1528 (reference (h)) should be used for assessing the manufacturing objectives and requirements to be met by the contractor's manufacturing management system."

No change recommended.

• Reference 29
MIL-STD-1521, "Technical Reviews and Audits for Systems, Equipments, and Computer Programs"

Part 6, Section O, Procedure 3.e.(1):
"During the Preliminary Design Review (PDR), Critical Design Review (CDR), and the Production Readiness Review (PRR), the contractor's production engineering performance will be validated through objective evidence, such as process proofing tests and producibility analyses. This will be accomplished through tailored application of MIL-STD-1521 (reference (j)), adapted to specific program characteristics."

No change recommended.

• Reference 30
DoD-STD-2168, "Defense System Software Quality Program"

Part 6, Section P, Procedure 3.h:
From:
"For software developments, a quality assurance effort will be established which meets the intent of DoD-STD-2168 (reference (c)). Use of commercial practices which meet or exceed the intent of DoD-STD-2168 is encouraged."

To:
"For software developments, a quality assurance effort will be established using DoD-STD-2168 (reference (c)) as a guide. Use of commercial practices which meet or exceed the intent of DoD-STD-2168 is encouraged."

• Reference 31
MIL-Q-9858, "Quality Program Requirements"

Part 6, Section P, Paragraph 3.j:
"MIL-Q-9858 (reference (e)) provides further information on the elements of an effective quality program."

No change recommended.

• Reference 32
MIL-STD-1388, "Logistics Support Analysis"

Part 7, Section A, Procedure 3.e:
From:
"A tailored logistics support analysis (LSA), in accordance with MIL-STD-1388 (reference (h)), will be used iteratively throughout the acquisition program as an integral part of the systems engineering process."

To:
"A tailored logistics support analysis (LSA), which meets the intent of MIL-STD-1388 (reference (h)) as a guide, will be used iteratively throughout the acquisition program as an integral part of the systems engineering process."

• Reference 33
Part 7, Section A, Paragraph 3.k.(1):
From:
"Post-production support planning should be a joint effort involving Government and contractors. The contract for Phase II, Engineering and Manufacturing Development, will require the contractor to include post-production support considerations in the early trade-off studies prescribed by MIL-STD-1388 (reference (h))."

To:
"Post-production support planning should be a joint effort involving Government and contractors. The contract for Phase II, Engineering and Manufacturing Development, will require the contractor to include post-production support considerations in the early trade-off studies which meet the intent of MIL-STD-1388 (reference (h))."

• Reference 34
MIL-STD-1379, "Military Training Programs"
MIL-STD-1472, "Human Engineering Design Criteria for Military Systems, Equipment, and Facilities"
MIL-STD-1800, "Human Factors Engineering"
MIL-STD-1801, "User-System Interface"
MIL-H-46855, "Human Engineering Requirements for Military Systems, Equipment, and Facilities"

Part 7, Section B, Procedure 3.i:
"Additional guidance is contained in MIL-STD-1379, MIL-STD-1472, MIL-STD-1800, MIL-STD-1801, and MIL-H-46855 (references (f) through (j)).

No change recommended.

• Reference 35
DoD Directive 4640.11, "Mandatory Use of Military Telecommunications Standards in the MIL-STD-188 Series," December 21. 1987 canceled)
MIL-STD-188 Series, "Military Telecommunications Standards"

Part 7, Section C, Paragraph 1.a:
"This section replaces DoD Directive 5160.51, "Precise Time and Time Interval - Planning, Coordination, and Control"; DoD Directive 4640.11, "Mandatory Use of Military Telecommunications Standards in the MIL-STD-188 Series"; and DoD Directive 4630.7, "Electrical Power Modernization Program for Critical Command, Control, and Communications Facilities" (references (a), (b),and (c)), which have been canceled.

No change recommended.

• Reference 36
Part 7, Section C, Paragraph 3.a:
"The MIL-STD-188 series (reference (e)) addresses telecommunications design parameters and influences the functional integrity of telecommunications systems and their ability to interoperate efficiently with other functionally similar Government and commercial systems. The MIL-STD-188 series, appropriately tailored, will be used for all inter- and intra-DoD Component systems and equipment to ensure interoperability and compatibility."

No change recommended.

• Reference 37

MIL-STD-483, "Configuration Management Practices for Systems, Equipment, Munitions, and Computer Programs"
MIL-STD-490, "Specification Practices"
DoD-STD-2167, "Defense System Software Development"
Mil-STD-480, "Configuration Control - Engineering Changes, Deviations and Waivers"
Mil-STD-481, "Configuration Control - Engineering Changes, Deviations and Waivers (Short Form)"
MIL-STD-482, "Configuration Status Accounting Data Elements and Related Features"
MIL-STD-1521, "Technical Reviews and Audits for Systems, Equipments, and Computer Programs"

Part 9, Section A, Paragraph 3.d:

From:

"Configuration identification will be prepared in the form of technical documentation in accordance with MIL-STD-483, MIL-STD-490, and DoD-STD-2167 (references (b), (c), and (d)). Approved configuration identification will be the basis for configuration audits, configuration control, and configuration status accounting."

To:

The MIL-STD-480 series has been replaced by MIL-STD-973, "Configuration Management". The section must be rewritten to account for change in standards. The rewritten section should state that any contractor configuration control program is acceptable as long as the intent of MIL-STD-973 is satisfied. Contractor forms are acceptable as long as the necessary information is provided.

• Reference 38

Part 9, Section A, Procedure 3.f:

From:

"Configuration status accounting will provide a track of configuration identification changes and document the configuration of items. Configuration status will be documented through tailored application of MIL-STD-483, DoD-STD-2167, and MIL-STD-482 (references (b), (d), and (g))."

To:

"Configuration status accounting will provide a track of configuration identification changes and document the configuration of items. Configuration status will be documented through tailored application of MIL-STD-973 and DoD-STD-2167 (references TBD). Contractor forms which provide the necessary information are acceptable."

• Reference 39
Part 9, Section A, Procedure 3.h:
From:
"Configuration audits will verify and document that the configuration item and its configuration identification agree, are complete and accurate, and satisfy program requirements. DoD-STD-2167 and MIL-STD-1521 (references (d) and (h)) contain procedures for conducting configuration audits."

To:
"Configuration audits will verify and document that the configuration item and its configuration identification agree, are complete and accurate, and satisfy program requirements. Configuration audits shall meet the intent of DoD-STD-2167 and MIL-STD-973 (references TBD)."

• Reference 40
MIL-STD-1840, "Automated Interchange of Technical Information"
DoD-STD-1700, "Data Management Program"
MIL-T-31000, "Technical Data Package, General Specifications for"

Part 9, Section B, Paragraph 3.a.(5)(a):
From:
"Contract deliverable data will be prepared and used in digital form unless it is not cost-effective for the Government. Maximum use should be made of available contractor automated data bases. Data to be delivered in digital form will comply with computer aided acquisition and logistics support (CALS) initiatives and MIL-STD-1840 (reference (f)). Refer to MIL-HDBK-59 (reference (g)) for guidance in selecting the specific digital data.

To:
"Contract deliverable data will be prepared and used in digital form unless it is not cost-effective for the Government. Maximum use should be made of available contractor automated data bases. Data to be delivered in digital form will comply with computer aided acquisition and logistics support (CALS) initiatives and the intent of MIL-STD-1840 (reference (f)). Refer to MIL-HDBK-59 (reference (g)) for guidance in selecting the specific digital data.

• Reference 41
Part 9, Section B, Procedure 3.j:
"Additional guidance is contained in DoD Directive 5200.21, MIL-STD-963, DoD-STD-1700, and MIL-T-31000 (references (l) through (o))."

No change recommended.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Managers
Director Defense Logistics Agency

SUBJECT: Management and Manufacturing Standards Requiring Priority Action

1. The military standards listed in enclosure 1 have been identified by industry as being the most significant barriers to commercial processes, as well as the major cost drivers in defense acquisitions. These standards represent, in part, the cost premium DoD pays relative to commercial processes and products. These standards must receive top review priority with the goal being (in priority order) to: cancel or inactivate for new design, transfer to nongovernment standards, convert to performance-based specifications, or retain as military unique.

2. I would like you to initiate action immediately to review these standards and establish an aggressive schedule for appropriate disposition; the goal for completion is two years. Specific plans will be developed by the Service/Agency Standards Improvement Offices and progress tracked by the Defense Standards Improvement Council.

3. Related to the above review, I am also directing that Standardization Program Plans for the Standardization Areas identified in DoD 4120.3-M be revised or prepared. These Plans must implement the appropriate recommendations contained in, "Blueprint for Change, Report of the DoD Process Action Team on Standards." These plans will be reviewed by the Defense Standards Improvement Council within six months.

Signature Block

ATTACHMENT 3

Draft*
Management and Manufacturing Specifications and Standards

Requiring Priority Action

The following list was prepared using DoDI 5000.2; the list of key acquisition military specifications and standards in DoD 4120.3-M; two industry surveys conducted by the Army Materiel Command and the Office of the Secretary of Defense's Defense Management Review-Working Group Nine; and the American Defense Preparedness Association Report, "Doing Business With DoD, The Cost Premium" and their statements on Military Specifications and Standards before the House Armed Services Committee, Subcommittee on Investigations, July 22, 1992.

MIL-STD-490	Specifications Practices
MIL-STD-2000	Soldering Technology
MIL-STD-45743	Soldering
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-STD-275	Printed Wiring for Electrical Equipment
MIL-STD-454	Electronic Equipment Requirements
MIL-STD-461	Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference
MIL-STD-462	Measurement of Electromagnetic Interface Characteristics
MIL-STD-463	Definitions and Systems of Units, Electromagnetic Interference, and Electromagnetic Compatibility Technology
MIL-STD-883	Test Methods and Procedures for Microelectronics

* The Deputy Assistant Secretary of Defense (Production Resources) will finalize this list.

ENCLOSURE 1 TO ATTACHMENT 3

MIL-STD-2165	Testability Program for Electronic System and Equipment
MIL-STD-5400	Electronic Equipment, Aerospace, General Specification
MIL-E-6051	System Electromagnetic Compatibility Requirements
MIL-C-28809	Circuit Card Assemblies, Rigid, Flexible and Rigid-Flex
MIL-M-38510	Microcircuits
MIL-P-46843	Printed Wiring Assemblies
MIL-P-55110	Printed Wiring Boards
MIL-STD-881	Work Breakdown Structure
MIL-STD-1567	Work Measurement
MIL-STD-337	Design to Cost
MIL-STD-470	Maintainability Program Requirements for Systems and Equipment
MIL-STD-471	Maintainability Demonstration
MIL-STD-499	Engineering Management
MIL-STD-781	Reliability Testing for Engineering Development, Qualification, and Production
MIL-STD-785	Reliability Program for Systems and Equipment Development and Production
MIL-STD-790	Reliability Assurance Program for Electronic Parts Specifications
MIL-STD-1543	Reliability Program Requirements for Space and Missiles Systems
MIL-STD-810	Environment Test Methods and Engineering Guidelines
MIL-STD-882	System Safety Program Requirements
MIL-STD-973	Configuration Management
MIL-STD-1388	Logistics Support Analysis

DOD-STD-1467	Software Support Environment
DOD-STD-2167	Defense System Software Development
DOD-STD-2168	Defense System Software Quality Program
MIL-STD-1472	Human Engineering Design Criteria for Military Systems, Equipment and Facilities
MIL-STD-1800	Human Engineering Performance Requirements for Systems
MIL-STD-1528	Manufacturing Management Program
DOD-STD-100	Engineering Drawing Practices
MIL-T-31000	Technical Data Package
MIL-STD-1521	Technical Reviews and Audits for Systems Equipment
MIL-STD-1250	Corrosion Prevention and Deterioration Control in Electronic Components
MIL-STD-1520	Corrective Action and Disposition System for Nonconforming Material
MIL-STD-1535	Supplier Quality Assurance Program Requirements
MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electronic Parts, Assemblies and Equipment
MIL-STD-2164	Environmental Stress Screening Process for Electronic Equipment
MIL-Q-9858	Quality Program Requirements
MIL-I-45208	Inspection System Requirements
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-45662	Calibrations System Requirements
MIL-STD-1310	Shipboard Bonding, Grounding, and Other Technology
MIL-STD-980	Foreign Object Damage Prevention in Aerospace Products

MIL-STD-1367	Packaging, Handling, Storage, and Transportation Program Requirements for Systems and Equipment
MIL-M-15071	Equipment and Systems Contexts Requirements for Manuals, Technical
MIL-M-38784	General Style and Format Requirements Manual, Technical
MIL-M-63036	Preparation of Operators Manual, Technical
MIL-M-63041	Depot Maintenance Work Requirements Manual, Technical
MIL-S-8879	Screw Threads, Controlled Radius Roots With Increased Minor Diameter

Innovative Contract Management

RECOMMENDATION: **All new high value solicitations and ongoing contracts will have a statement encouraging contractors to submit alternative solutions to military specifications and standards.**

Task 1: Initiate action to revise the Defense Federal Acquisition Regulation Supplement (DFARS) to reflect substantially the following:

- The following provision shall be inserted in all requests for proposals (RFPs) and request for quotations (RFQs) which cite military specifications and standards when the contract amount is expected to be $100,000 or more.

  NOTICE TO OFFERORS - Alternatives to Military Specifications and Standards

  The Department of Defense is committed to minimizing the incorporation of military specifications and standards and outdated federal and commercial documents in contracts, and is seeking to use alternative, tailored, or updated nongovernment specifications and standards to the maximum extent practicable to satisfy its requirements. Offerors are encouraged to identify and propose alternatives to those military, federal or commercial specifications and standards which are incorporated in this solicitation. Such alternatives will be considered by the government during the source selection.

- The following clause shall be inserted in all new supply contracts which cite military specifications and standards when the contract is expected to be $100,000 or more:

  Updating Specifications and Standards

  If the contractor has a contract, or multiple DoD contracts, that incorporate outdated or different versions of military specifications or standards, the contractor may request that all of its contracts be updated to the latest version of the applicable specifications or standards. Updating must not affect the form, fit, or function of any deliverable item, or increase the cost to the government. The contractor may submit updating requests through the administrative contracting officer to the responsible contracting officers and shall perform the contracts in accordance with the existing specifications and standards until notified by the administrative contracting officer that updating is approved.

Responsibility: The office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary (Production Resources).

Task 2: Issue policy guidance services providing substantially the following:

Existing contracts: Contractors that have current contracts priced at $500,000 or more and a substantial contract effort remaining to be performed shall be encouraged to propose alternatives to those military unique specifications and standards listed in the Department of Defense Index of Specifications and Standards (DoDISS) when the contractor feels the contractually required specification or standard:

- Impedes the use of modern engineering, manufacturing, or management processes.
- Is not cost effective.

To encourage contractor efforts and minimize administrative burdens, contracting officers shall expedite the processing of proposed alternatives to the maximum extent possible, and are encouraged to use the no-cost settlement method of FAR 48.104-3 when appropriate. Contracting officers may also negotiate no-cost settlements when they determine that cost savings to the contractor are offset by the government costs of implementation.

In addition, it is recognized that contractors often have multiple DoD contracts in the same facility. These contracts may cite the same basic specifications and standards but may reflect different change numbers to the specifications and standards, depending on the time the individual contract was issued. This condition often causes the contractor to manage multiple systems for the same general functional area or responsibility. Contractors are encouraged to notify the respective program managers and administrative contracting officers where such a condition exists and where contract modifications to upgrade the specifications and standards to current configuration are considered appropriate and cost-effective.

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary (Production Resources).

Task 3: Issue acquisition policy guidance allowing for the consideration of additional profit or fees to contractors offering alternatives to milspecs and standards.

- Add to DFAR 215.971-2(f)(ii), after "... spare parts pricing reform, value engineering", the following: "offering of viable military specification alternative);".

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary (Production Resources).

Prohibit Use of Military Specifications and Standards

RECOMMENDATION: Prohibit the use of military specifications and standards for all ACAT programs except when authorized by the Service Acquisition Executives or designees.

Task 1:

- DepSecDef issue policy prohibiting the use of military specifications and standards in all ACAT Programs except where authorized by the Service Acquisition Executive or designees.
- Exemption may only be granted for performance-based specifications, truly military unique specifications and standards, no acceptable alternative, or not cost effective.
- Require that an order of preference for selection of specifications and standards (functionally equivalent to MIL-STD-970) be included in all prime contracts.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: USE OF MILITARY SPECIFICATIONS AND STANDARDS page H-29

Responsibility: Office of primary responsibility to prepare and staff this change is Deputy Assistant Secretary (Production Resources).

DRAFT)RANDUM

MEMORANDUM FOR Service Acquisition Executives
Director Defense Logistics Agency

SUBJECT: Use of Military Specifications and Standards

1. To facilitate the transition from the use of military specification and standards, to stating requirements in a manner that fosters greater application of commercial processes and procedures, the following policies are provided for all acquisition category I, II, III and IV programs.

2. The use of military specifications and standards are prohibited in all ACAT programs. Exemptions to this policy may be granted by the Service Acquisition Executive or designees for: performance-based specifications, truly military unique specifications and standards, no acceptable alternative is available, or not cost effective. For ships with nuclear propulsion plants, the Director, Naval Nuclear Propulsion, will determine the specifications and standards to be used.

3. An order of preference for selection of specifications and standards will be included in every contract in accordance with OMB Circular No. A-119.

4. This policy is effective 180 days from the date of this memorandum.

Signature Block

ATTACHMENT

Excessive Referencing

RECOMMENDATION: Change current processes and procedures to ensure that specifications and standards only list references essential to establishing technical requirements.

Task 1. DepSecDef issues a policy memorandum that prohibits citing the specific document or types of documents shown in Attachment 1 as requirements in military or federal specifications and standards, bulletins, or commercial item descriptions. Incorporate this change into MIL-STDs 490, 961, and 962 which govern the requirements for preparing specifications and standards.

Responsibility: The office of primary responsibility to prepare and staff the policy memorandum and initiate the standardization projects to revise MIL-STDs 490, 961, and 962 is the DASD(PR) Standardization Program Division.

SEE ATTACHMENT 2, DRAFT MEMORANDUM SUBJECT: PROHIBITED REFERENCES IN MILITARY AND FEDERAL STANDARDIZATION DOCUMENTS, page H-36

DRAFT*

PROHIBITED LIST OF REFERENCES IN MILITARY AND FEDERAL SPECIFICATIONS AND STANDARDS, BULLETINS, OR COMMERCIAL ITEM DESCRIPTIONS

The following is a list of the types of documents that shall not be *cited as requirements* in military or federal specifications, standards, bulletins, or commercial item descriptions. This list is not all inclusive but is intended to demonstrate, by example, the types of inappropriate document references. Typically, reference to these documents is inappropriate because they more properly belong in the contract, they are policy documents directed at government and not contractor personnel, they inhibit use of commercial products or processes, or they represent traditional management approaches that inhibit more creative and effective risk management alternatives.

- All directives, instructions, regulations, or other types of policy documents
- Military Handbooks. These documents are useful for guidance purposes but shall not be cited references in military or federal specifications.
- Data item descriptions (DIDs)
- All military and federal packaging specifications and standards. It is acceptable to specify commercial packaging or reference commercial packaging standards such as ASTM D3958, but government unique packaging requirements shall be specified in the contract.
- Management oversight specifications and standards, including but not limited to:

MIL-STD-470	Maintainability Program for Systems and Equipment
MIL-STD-499	Engineering Management
MIL-STD-680	Standardization Program Requirements for Defense Acquisitions
MIL-STD-781	Reliability Testing for Engineering Development, Qualification, and Production

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* Final list will be prepared by the DASD(PR) Standardization Program Division and approved by the ASD(PR).

ATTACHMENT 1

MIL-STD-785	Reliability Program for Systems and Equipment Development and Production
MIL-STD-790	Product Assurance Program for Electronic and Fiber Optic Parts Specifications
MIL-STD-882	System Safety Program Requirements
MIL-STD-965	Parts Control Program
MIL-STD-973	Configuration Management
MIL-STD-981	Design, Manufacturing and Quality Standards for Custom Electromagnetic Devises for Space Applications
MIL-STD-1388	Logistics Support Analysis
MIL-STD-1465	Configuration management of Armaments, munitions, and Chemical Production Base Modernization
MIL-STD-1482	Human Engineering Design Criteria for Military Systems Equipment and Facilities
MIL-STD-1528	Manufacturing Management Program
MIL-STD-1530	Aircraft Structural Integrity Program, Airplane Requirements
MIL-STD-1535	Supplier Quality Assurance Program Requirements
MIL-STD-1541	Electromagnetic Compatibility Requirements for Space Systems
MIL-STD-1543	Reliability Program Requirements for Space and Launch Vehicles
MIL-STD-1546	Parts, Materials, and Processes Control Program for Space and Launch Vehicles
MIL-STD-1556	Government/Industry Data Exchange Program Contractor Participation Requirements
MIL-STD-1567	Work Measurement
MIL-STD-1568	Materials and Processes for Corrosion Prevention and Control in Aerospace Weapons Systems

MIL-STD-1574	System Safety Program for Space and Missile Systems
MIL-STD-1586	Quality Program Requirements for Space and Launch Vehicles
MIL-STD-1625	Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships
MIL-STD-1634	Module Descriptions for the Standards Electronic Modules Program
MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment
DOD-STD-1700	Data Management Program
MIL-STD-1771	Value Engineering Program Requirements
MIL-STD-1783	Engine Structural Integrity Program
MIL-STD-1785	System Security Engineering Program Management Requirements
MIL-STD-1794	Human Factors Engineering Program for Intercontinental Ballistic Missile Systems
MIL-STD-1798	Mechanical Equipment and Subsystems Integrity Program
MIL-STD-1799	Survivability, Aeronautical Systems
MIL-STD-1800	Human Engineering Performance Requirements for Systems
MIL-STD-1803	Software Development Integrity Program
MIL-STD-1836	Standardization & Control Program for Parts, Materials & Processes Used in Intercontinental Ballistic Missile Weapon Systems
MIL-STD-1843	Reliability Centered Maintenance for Aircraft, Engines and Equipment
MIL-STD-2067	Aircrew Automated Escape Systems reliability and Maintainability (R/M) Program, Requirements for
MIL-STD-2069	Requirements for Aircraft Nonnuclear Survivability Program
MIL-STD-2077	General Requirements Test Program Sets

MIL-STD-2093	Reliability Procedures for Production of Guidance and Control Section for Guided Missile AIM/RIM/7
DOD-STD-2107	Product Assurance Program Requirements for Contractors
MIL-STD-2164	Environmental Stress Screening Process for Electronic Equipment
MIL-STD-2165	Testability Program for Systems and Equipments
DOD-STD-2167	Defense System Software Development
DOD-STD-2168	Defense System Software Quality Program
MIL-STD-2184	Procedures for Installation, Inspection, Maintenance and Repair of Absorber, Reflector and Decoupler
MIL-STD-2186	Real-Time Outfitting Management Information System, General Requirements for
MIL-STD-40000	Parts Control Program for Nondevelopmental Items (NDIS)
MIL-STD-6870	Inspection Program Requirements, Nondestructive, for Aircraft and Missile Materials and Parts
MIL-E-8970	Engine and Related Propulsion and Power Equipment, Aircraft, Acceptance Tests of, Sampling Plan for, Statistical
MIL-Q-9858	Quality Program Requirements
MIL-O-13830	Optical Component for Fire Control Instruments, General Specification Governing the Manufacture, Assembly and Inspection of
MIL-F-13926	Fire Control Material, Manufacture and Inspection, General Specification for
MIL-S-28825	Switchboard, Audio, design, Test and Manufacture of
MIL-P-29005	Publications, Planned Maintenance System, for training Devices
MIL-I-45208	Inspections Systems Requirements
MIL-P-46195	Program Requirements, Nondestructive Inspection, for Weapon Systems, Subsystems, Parts and Materials

ASQC-Q90	Quality Management and Quality Assurance Standards - Guidelines for Selection and Use
ASQC-Q91	Quality Systems - Model for Quality Assurance in Design/ Development, Production, Installation and Servicing
ASQC-Q92	Quality Systems - Model for Quality Assurance in Production and Installation
ASQC-Q94	Quality Management and Quality Systems Elements - Guidelines
WI-QSGSQCP	Guide specifications and Quality Certification Program, Architectural Woodwork Quality Standards
IS09000	Guidelines for Selection and Use - Quality Management and Quality Assurance Standards
ISO9001	Systems, Quality - Models for Quality Assurance in Design/ Development, Production, Installation and Servicing
ISO9002	Systems, Quality - Model for Quality Assurance and Installation
IS09004	Guidelines - Quality Management and Quality System Elements

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives and Director
Defense Logistics Agency

SUBJECT: Prohibited References in Military and Federal Specifications and Standards, Bulletins, or Commercial Item Descriptions

1. Excessive referencing of other documents in military specifications and standards results in additional costs, making it difficult to identify actual user needs. Management, contractual, special packaging, data, and policy-related documents are examples of different types of documents inappropriately or repeatedly cited in government specifications and standards, which should be contained in the contract language.

2. Enclosure is a list of the type of document that shall not be cited as requirements in military or federal specifications, standards, handbooks, bulletins, or commercial item descriptions. This list is not all inclusive but intended to demonstrate the types of document references that are inappropriate.

Signature Block

ATTACHMENT 2

Tiering of Specifications

RECOMMENDATION: Eliminate the current process of contractually imposing hidden requirements through references listed in equipment/product specifications or noted on engineering drawings.

Task 1: Acquisition Policy. Change Defense acquisition policy in DoD Instruction 5000.2, Part 10, Section C, Acquisition Streamlining, Paragraph 3, Procedures (3.b.(3)), to state that,

"During production, only those specifications cited, down to and including the equipment/product specifications and their first tier-references shall be mandatory for use. Lower tier references will be guidance only and will not be contractually binding. Specifications listed on engineering drawings are considered to be first-tier references. Approval of exceptions to this policy is delegated to the Service/Agency Standards Improvement Offices and the Director, Naval Propulsion (for specifications and drawings used in Nuclear Propulsion Plants)."

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: INTERIM CHANGE NOTICE, DoDI 5000.2 page H-38

Responsibility: Office of primary responsibility to prepare and staff this change and interim policy memo is the DASD(PR) Standardization Program Division.

- Effective date of the new policy should be set such that buying activities have adequate time to establish necessary review and update mechanisms.
- Distribute interim policy memorandum immediately upon signature.
- Complete DoDI 5000.2 revision within six months after signature of the interim policy memorandum.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Interim Change Notice, DoDI 5000.2

1. The following change to DoDI 5000.2, Part 10, Section C, Acquisition Streamlining, Paragraph 3, Procedures (3.b.(3)) is currently being staffed. This advance notice is provided for your action and is effective immediately on all new development efforts. Solicitations must be structured so the resulting production baseline, including technical data and engineering drawings, is developed in accordance with this change.

"During production, only those specifications cited, down to and including the equipment/product specifications and their first tier-references, shall be mandatory for use. Lower tier references will be guidance only and will not be contractually binding. Specifications listed on engineering drawings are considered to be first-tier references. Approval of exceptions to this policy is delegated to the Service/Agency Standards Improvement Offices and the Director, Naval Nuclear Propulsion (for specifications and drawings used in Nuclear Propulsion Plants)."

2. Procurement Commands are directed to apply this policy on new contracts citing existing technical data packages and engineering drawings as appropriate. I would like to see your plans on how this policy will be applied within 180 days.

Signature Block

ATTACHMENT

National Standards

RECOMMENDATION: Form partnerships with industry associations to develop nongovernment standards for the replacement of military standards where practical.

Task 2: Execute Memoranda of Understanding (MOU) between the DoD and the nongovernment standards bodies to promote the use of NGS in the design, development, and acquisition of defense materiel to the maximum extent possible.

SEE ATTACHMENT, SAMPLE MEMORANDUM OF UNDERSTANDING page H-40

Responsibility: Office of primary responsibility to prepare and staff the MOU between the DoD components and the nongovernment standards body is the DASD(PR) Standardization Program Division. Service/Agency Standards Improvement Executive will monitor status.

Sample

MEMORANDUM OF UNDERSTANDING
DoD/____ COOPERATIVE STANDARDS PROGRAM

1. GENERAL:

a. It is Department of Defense (DoD) policy to use, to the maximum extent possible, Nongovernment Standards (NGS) in the design, development, and acquisition of defense materiel. Use of NGS in lieu of unique military standards should reduce costs to both the DoD and industry by buying to current production practices. A joint industry/DoD effort in the preparation and maintenance of NGS ensures that the requirements reflect the needs of all parties, and that application of the resulting standard is as wide as possible.

b. This cooperative agreement between the Department of Defense and (Voluntary Standards Body) is designed to foster increased usage of ____ standards specifically, and, in general create and define the infrastructure that could apply to other nongovernment standards bodies (NGSB).

POLICY:

a. DoD will use NGS to the maximum extent possible.

b. DoD will use the most current version of those standards concurrent with ____'s issuance as approved standards.

c. DoD technical experts will participate on designated ___ committees in the development and revision process of NGS, and serve as the DoD coordinating activity.

PROCEDURES:

a. The DoD and ____ will jointly establish techniques that will facilitate the participation of DoD personnel in ____ committee activities.

ATTACHMENT

b. The DoD and ____ will jointly develop procedures for identifying existing ____

standards that can be used instead of existing military standards and specifications. This would include military standards and specifications that can be replaced by existing ____ standards by modifying or by including the DoD unique requirements in a Supplementary Requirements Section of the ____ standard.

c. The DoD and ____ will jointly identify subject areas for which military standard currently exist or are needed, where no ____ standard exists. In these areas, the DoD will request that the ____ committee develop an ____ standard to replace the military standard or to meet a military need for a new standard.

d. DoD members of ____ committees will fully participate in the development and coordination of ____ standards.

e. ____ committees will attempt to meet the DoD's needs in standards, and work with the DoD to develop ways to meet their requirements, such as supplementary requirements sections, addenda, etc.

f. Coordination and communication between the DoD and ____ points of contact will occur to suggest policy and procedural changes, resolve issues, and to continually maintain awareness.

DoD REPRESENTATIVE: ____ REPRESENTATIVE:

_____ _____

(name) (name)

_____ _____

(date) (date)

Specifications and Standards Development

RECOMMENDATION: Establish a process to include industry and government users up-front in the specifications and standards development and validation processes.

Task 2: Require each preparing activity to have a formal procedure for resolving feedback and logging the results. (See the section on Automated Specifications and Standards Development for the PAT's recommendation on an automated feedback system.)

Responsibility: The DASD(PR) Standardization Program Division will prepare and staff the required policy.

Task 3: Issue policy that specifications and standards may not be validated until all essential comments have been resolved, and any need for repetitive major waivers and deviations has been eliminated. Successful management of this task depends upon implementation of an automated user feedback system. (Note: The preparing activity can resolve industry comments via a formal letter of non-acceptance providing rationale.)

Responsibility: The DASD(PR) Standardization Program Division will prepare and staff the required policy.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: DETERMINATION OF REQUIREMENTS AND FEEDBACK POLICY FOR SPECIFICATIONS AND STANDARDS, page H-43

Task 5: Issue policy requiring Defense Contract Management Command (DCMC) to report to the specifications and standards preparing activities all approved repetitive major waivers and deviations to military specifications and standards.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: FEEDBACK REQUIREMENTS ON WAIVERS AND DEVIATIONS page H-44

Responsibility: The Director, DCMC will designate the office of primary responsibility.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Determination of Requirements and Feedback Policy for Specifications and Standards

1. The inclusion of interested government and industry entities in the development and revision process for specifications and standards, as well as the validation and cancellation processes, is crucial to effective standards management and the assurance of meaningful standardization decisions. Manufacturers, suppliers, government and industry users and procuring activities have a vested interest in the determination of requirements and the currency of specifications and standards. These entities have the capability and incentives to provide valuable input to the requirements determination process and ensure attainable products and processes.

2. To ensure quality specifications and standards development and maintenance, the following actions shall be incorporated into the process:

a. For new or revised specifications and standards preparation, Preparing Activities (PAs) shall solicit input from known manufacturers, suppliers, procurers and users of the products or processes governed by the specifications or standards. Input solicited shall include, but not be limited to, the project scope, detailed requirements, manufacturing or processing techniques or issues, commercial availability or opportunities and user concerns.

b. For coordination, validation or cancellation actions the PA shall employ a feedback system to provide automated direct communications among government and between government and industry parties. Such a system has been developed by the Navy a being shared with other government activities.

c. Specifications and standards may not be validated until all essential comments have been resolved and any need for repetitive waivers and deviations has been eliminated. Industry must be advised in writing of the nonacceptance of their comments and the underlying rationale before validation.

3. Provide a plan of action with milestones to implement these process improvements no later than sixty (60) days from the date of this memorandum.

Signature Block

ATTACHMENT 1

DRAFT MEMORANDUM

MEMORANDUM FOR Defense Contract Management Command (DCMC)

SUBJECT: Feedback Requirements on Waivers and Deviations

1. In response to a Department of Defense (DoD) initiative on acquisition reform regarding military specifications and standards, all DCMC activities shall report to the cognizant Preparing Activities (PAs) all approved repetitive major waivers and deviations that affect DoD military specifications and standards. DCMC activities shall employ a feedback system to provide electronic communication to the PAs.

2. Provide a plan of action with milestones to implement this process improvement no later than sixty (60) days from the date of this memorandum.

Signature Block

ATTACHMENT 2

Specifications and Standards Responsibility

RECOMMENDATION: Assign specifications and standards preparation responsibility to the Defense Logistics Agency (DLA) for Federal Supply Classes that are primarily commercial.

Task 1: Direct the Services and Defense Agencies to transfer preparing activity responsibility to DLA for specifications and standards describing commercial-type products where DLA is the Federal Supply Class procuring activity.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: SPECIFICATIONS AND STANDARDS TRANSFER TO DEFENSE LOGISTICS AGENCY (DLA) page H-46

Responsibility: The Deputy Assistant Secretary of Defense (Production Resources) is responsible for preparing a directive for the Under Secretary of Defense for (Acquisition & Technology) signature.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives and Director,
Defense Logistics Agency

SUBJECT: Specifications and Standards Transfer to Defense Logistics Agency (DLA)

1. Recent defense manpower reductions combined with mass consumable item transfers to DLA have resulted in some Service specifications and standards preparation and maintenance staffs being cut to a fraction of their previous size. As a consequence, our ability to process and coordinate specifications and standards has been seriously eroded. This accounts for a substantially large number of out-of-date or obsolete specifications and standards and slow conversion of military specifications and standards to commercial standards.

2. With that in mind, in order to improve the overall quality of our specifications and standards and speed commercialization of military equipment, the Services shall transfer preparation and maintenance responsibility to DLA for those specifications and standards which are primarily commercial in nature.

3. To accomplish this task expeditiously you are requested to prepare detailed plans outlining the specific Federal Supply Classes to be transferred, the sequence of transfer, any additional manpower required by DLA, and any weapons system peculiar supportability issues. The objective is to complete these transfers within four years. I ask the DLA Standards Improvement Executive to take the lead on this initiative.

Signature Block

ATTACHMENT

Oversight

RECOMMENDATION: Direct government oversight be reduced by substituting process control and nongovernment standards in place of development/production testing and inspection and military unique quality assurance systems.

Task 1: Acquisition Policy. Revise Defense acquisition policy in DoDI 5000.2, Part 6, Section P, Quality, Paragraph 3, Procedures, Subparagraph 7 j, Additional Guidance, to delete the reference to
[MIL-Q-9858], and to state that,

> "Defense acquisition programs should reduce government oversight by substituting process control and commercial systems for development and production testing and inspection requirements in procurement/technical data packages. During production, the Program Manager should strongly encourage use of process control techniques and quality systems that comply with commercial standards, American National Standards Institute (ANSI) Standards Q90-94, or the International Organization for Standardization (ISO) 9000 quality standards."

NOTE: Utilization of quality standards such as ISO 9000 on DoD contracts would not require companies to be certified and registered as conforming to the standard. Although companies may feel certification and registration are desired or required to do business in general, they are not an additional cost of doing business with DoD.

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary (Production Resources).

Task 2: Procurement Regulation Changes. Develop and incorporate appropriate changes to Part 246 (Subparts 246.2 and 246.4) of the Defense Federal Acquisition Regulation Supplement (DFARS) to implement the policy stated above, specifically indicating that, in production contracts, contractors are strongly encouraged to use process control techniques and quality systems that comply with commercial standards, such as American National Standards Institute (ANSI) Standards Q90-94 or the International Organization for Standardization (ISO) 9000 Series quality standards.

Responsibility: Office of primary responsibility to prepare and staff the DFAR case is the Deputy Assistant Secretary (Production Resources).

Task 3: DepSecDef issues a policy memorandum emphasizing greater use of process controls

in lieu of development and production testing and inspection. This change must then be incorporated into Mil-STDs 490, 961, and 962, which govern the requirements for preparing specifications and standards.

Responsibility: The office of primary responsibility for this action is the Deputy Assistant Secretary of Defense (Production Resources). The DASD(PR) Standardization Program Division projects to update MIL-STDs 490, 961, and 9652.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: GREATER USE OF PROCESS CONTROL IN CONTRACT REQUIREMENTS, page H-49

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Greater Use of Process Control in Contract Requirements

1. Excessive use of development and production testing and inspection requirements in military specifications and standards results in additional manufacturing costs and unnecessary deviation from commercial practices, with no additional value added. While few would argue the need to verify conformance to contract requirements, alternative processes would allow a reduction of testing and inspection requirements in government contracts, while maintaining product reliability.

2. Therefore, SAEs will require their PEOs and DRPMs to use manufacturing process controls in contract solicitations while reducing test and inspections typically cited in military specifications and standards. This includes the consideration of alternative process control procedures offered by bidders in response to solicitations and as change proposals after contract award.

Signature Block

ATTACHMENT

Contractor Test and Inspection

RECOMMENDATION: Direct a goal of reducing the cost of contractor conducted development and production test and inspection by using simulation, environmental testing, dual-use test facilities, process controls, metrics and continuous process improvement.

TASK 1: DepSecDef issues a memorandum establishing a goal for PMs to reduce the cost of contractor conducted/related development and production test and inspection by incorporating into all contracts process control, continuous process improvement through the use of metrics, and other proven techniques to simultaneously improve performance and quality while reducing contractor test and inspection costs. (Contractor related test and inspection includes production lot acceptance testing conducted on government test ranges.) Buying Commands and PEO/PMs should be permitted to utilize a portion of the savings as an incentive to accomplish additional reforms.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: REDUCTION OF COST OF CONTRACTOR DEVELOPMENT AND PRODUCTION TEST AND INSPECTION, page H-51

Responsibility: The Principal Deputy Under Secretary of Defense (Acquisition & Technology) will be the primary office of responsibility to develop and staff the policy memo.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Directors of Defense Agencies

SUBJECT: Reduction of Cost of Contractor Development and Production Test and Inspection

Each DoD Component should establish a goal of reducing the cost of contractor-conducted/related development and production test and inspection by increasing the use of process control, continuous process improvement, and other proven techniques to improve performance and quality. (Contractor related test and inspection includes production lost acceptance testing conducted on government test ranges.) Correspondingly, military specifications and standards specified in contracts should be replaced with commercial specifications and standards where applicable. The Director of Defense Procurement will take appropriate action to review the existing department-level policies and procurement regulations to ensure that this initiative is not hindered, but encouraged.

Each Component buying command and PEO/PM should be permitted to utilize a portion of the savings as an incentive to accomplish additional reforms. The continued replacement of testing and inspection by continuous process improvement programs will be of great interest to the Department of Defense and your agency.

Signature Block

ATTACHMENT

Automated Specifications and Standards Development Aids

RECOMMENDATION: Direct use of automation to improve the processes associated with the development and application of specifications and standards and Data Item Descriptions (DIDs).

Task 6: Policy Memorandum. Prepare policy memorandum directing automation of the specifications and standards process.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: AUTOMATION SUPPORT FOR THE DEPARTMENT OF DEFENSE ACQUISITION PROCESS, page H-53

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

DRAFT MEMORANDUM

MEMORANDUM FOR Secretaries of the Military Departments
Chairman of the Joint Chiefs of Staff
Under Secretaries of Defense
Assistant Secretaries of Defense
Comptroller
General Counsel
Inspector General
Assistants to the Secretary of Defense
Director of Administration and Management
Directors of the Defense Agencies

SUBJECT: Automation Support for the Department of Defense Acquisition Process

1. I have established an Acquisition Process Corporate Information Management (APCIM) office to manage the application of automation systems to the Department's acquisition process. As part of its mission, the APCIM office will coordinate the Departments role in military and industry standards automation efforts, identify and procure acquisition automation systems and data for Department of Defense (DoD) wide use, and eliminate redundant DoD acquisition automation efforts.

2. I request that you support the mission and functions of the APCIM office in accordance with my memorandum of 13 October, 1993, subject: Accelerated Implementation of Migration Systems, Data Standards, and Process Improvement.

Signature

ATTACHMENT

Challenge Acquisition Requirements

RECOMMENDATION: Use Distributed Interactive Simulations (DIS), Design to Cost (DTC), and Cooperative Research and Development Agreements (CRADAs) to achieve aggressive cost/performance trade-offs and dual use capabilities.

Task 1: State a preference for use of DIS and modeling to provide a synthetic real-time environment for assessment of combat effectiveness in an integrated force environment, and to support critical assessment on the cost-effectiveness of proposed solutions. Revise DoDI 5000.2 as follows:

- Insert as para 2c to Part 4 of Section B, "Evolutionary Requirements Definition" (relabel existing paragraphs 2c through 2f as 2d through 2g respectively):

  "c. The examination of battlefield dynamics versus current and new technology capabilities shall be assessed through interactive simulation and modeling to the maximum extent practical. Any new capability shall be balanced against Design to Cost (see part 6 section K) to achieve optimum life cycle cost/performance benefits before any new requirement is proposed."

- Add para 2b(5) to Part 4, Section B, "Evolutionary Requirements Definition":

  "(5) The Statement will be reviewed regularly throughout the development cycle using simulation and modeling techniques to maintain assurance that cost and performance are affordable and achievable."

- Insert as para 2b to Part 6, Section A, "Systems Engineering" (relabel existing paragraphs 2b and 2c as 2c and 2d respectively):

  "b. If justified by a cost/benefit analysis, the manufacturing processes, the system, and the system's performance should be modeled and refined prior to start of production build."

- Add to para 2b of Part 6 Section K "Design to Cost":

  "b. Life Cycle Cost shall be modeled in conjunction with the battlefield dynamics simulation prior to issuance of the Statement of Need and refined throughout the development program."

Responsibility: Office of primary responsibility to prepare and staff this change is the Deputy Assistant Secretary of Defense (Production Resources).

Task 2: Issue policy memorandum encouraging use of CRADAs with industry to expand simulation databases and nodes and to foster dual-use industrial base opportunities.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CRADAs), page H-56

Responsibility: Office of primary responsibility to prepare and staff policy memorandum is the office of the Director, Defense Research and Engineering.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Cooperative Research and Development Agreements (CRADAs)

1. The DoD must accelerate the transition to greater use of commercial production processes and capabilities to help offset the eroding share of the industrial base supporting military procurement and the continuing decline in available military resources. Greater leverage in achieving this goal can be realized during formulation of military requirements through a more aggressive market research and a better understanding of the cost-performance of available technologies and the capabilities of industry to capitalize on these technologies.

2. CRADAs can be an important tool in promoting cooperative processes between military requirements builders and private sector systems developers. Extending the envelope of the CRADA to include dual-use technology consideration, Distributed Interactive Simulation (DIS) and life cycle cost influences can be helpful. Ready exchange of new ideas to enhance both military and commercial end products is essential.

3. Each Service is directed to offer unique initiatives on how CRADAs can be used, or expanded, to benefit requirements generation. The initiatives should concentrate on military systems requirements formulation emphasizing the balance of cost, performance, affordability, and dual-use opportunities.

Signature Block

ATTACHMENT

Pollution Prevention

RECOMMENDATION: Direct the establishment and execution of an aggressive program to eliminate, reduce and identify the quantities of toxic pollutants procured or generated through the use of specifications and standards.

Task 1. Leadership tasks:

- Appoints a continuing Toxic Pollutant Panel, chaired by the Deputy Under Secretary for Environmental Security, DUSD(ES), and including the Assistant Secretaries and Deputy Under Secretaries necessary to ensure integrated leadership for reducing toxic pollutants.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: ESTABLISHMENT OF A TOXIC POLLUTANT PANEL page H-58

Responsibility: Office of primary responsibility for staff action is Deputy Under Secretary of Defense (Environmental Security).

DRAFT MEMORANDUM

MEMORANDUM FOR Under Secretary of Defense of Environmental Security

SUBJECT: Establishment of a Toxic Pollutant Panel

1. I would like you to establish and chair a Toxic Pollutant Panel to provide leadership and direction for the Department of Defense's efforts to reduce toxic pollutants.

2. Please provide me a Charter for this group within 30 days. I would like membership to be at the Assistant Secretaries and Deputy Under Secretaries level.

Signature Block

ATTACHMENT

Role of Senior Leadership

RECOMMENDATION: Senior DoD management take a major role in establishing the environment essential for acquisition reform cultural change.

Task 1: DoD Policy. The DepSecDef issue policy directing the Services and Agencies to implement this report, the "Blueprint for Change" in support of the Defense Acquisition Reform Initiatives.

Responsibility: The office of primary responsibility to prepare and staff the policy statement is the Deputy Under Secretary of Defense (Acquisition Reform (DUSD(AR)). OSD implementing resources should be temporarily assigned to DUSD(AR) and the Defense Standardization Improvement Council should report to DUSD(AR) until the entire process is underway.

Task 3: Defense Standards Improvement Council (DSIC). The Standards Improvement Executives, with involvement, concurrence and endorsement of the Service Acquisition Executives, will oversee the execution/implementation of the recommendations in this report in accordance with approval/direction from the Deputy Secretary of Defense. The DSIC will provide direction, serve as the principal integration forum, resolve issues, provide feedback to the DUSD(AR), and monitor progress.

Responsibility: The Under Secretary of Defense (Acquisition & Technology) will issue a directive to the Defense Standards Improvement Council. The office of primary responsibility for preparing and staffing the directive is the DASD(PR) Standardization Program Division (See Attachment 1).

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: IMPLEMENTATION OF THE REPORT, "BLUEPRINT FOR CHANGE," page H-60

Task 4: Issue a change in policy that incentivizes Program Managers to select alternative solutions to military specifications and standards.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: ACQUISITION REFORM PROGRAM INCENTIVES page H-61

Responsibility: Office of primary responsibility to prepare and staff this change is the Principal Deputy Under Secretary of Defense (Acquisition & Technology). Approval authority is the Under Secretary of Defense (Acquisition & Technology).

DRAFT MEMORANDUM

MEMORANDUM FOR Under Secretary of Defense (Acquisition & Technology)
Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Implementation of the Report, "Blueprint for Change"

The report "Blueprint for Change" is approved for implementation. I am asking the Defense Standardization Improvement Council to assume complete responsibility for executing the recommendations provided in the report.

Please provide me a list of the principal personnel that will be involved in planning and executing this assignment including the Standards Improvement Executives and personnel from the Service/Agency Standards Improvement Offices. I expect your list to reflect personnel who will be dedicated to this effort.

Signature Block

ATTACHMENT 1

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives
Director, Defense Logistics Agency

SUBJECT: Acquisition Reform Program Incentives

1. As we evolve from traditional military business practices to a more commercial style, we will impose additional risk on the program manager. Accordingly, we must also adopt an incentive program that encourages the evaluation of alternatives by the Program Manager. Failure to do so will increase the risk of rejection of innovative contractor proposals, as risks not worth taking, when funds are already appropriated for the military specification solution.

2. Accordingly, when the solicitation permits alternatives to military specifications and standards in the offeror's response, program offices will evaluate alternative solutions. For those alternative solutions which are selected, the program office shall retain a portion of the savings, which are the result of the alternative solution. Use of the funds is limited to the intent of the appropriation and the obligation constraints associated with the type of funds.

Signature Block

ATTACHMENT 2

Standards Improvement Executives

RECOMMENDATION: Formalize the responsibility and authority of the Standards Improvement Executives, provide the authority and resources necessary to implement the standards improvement program within their Service/Agency, and assign a senior official with specifications and standards oversight and policy authority.

Task 1: Standards Improvement Executive. Require each Service Acquisition Executive to appoint a Standards Improvement Executive who will have access and accountability to the Service Acquisition Executive; advise the SAE in the acquisition review process; and have sufficient authority and resources to achieve DoD corporate military specifications and standards reform goals, including making determination of functional equivalency of commercial practices; and implement DoD 4120.3-M, "DoD Standardization Policies and Procedures." OSD and DLA will appoint a Standards Improvement Executive with comparable responsibility. The Standards Improvement Executive w ll be independent of the Competition Advocate and will be authorized redelegation on a case-by-case basis. A sample Standards Improvement Executive charter is attached. (See enclosure 1 to Attachment 1.)

SEE ATTACHMENTS, DRAFT MEMORANDUM SUBJECT: ASSIGNMENT OF SERVICE/DLA STANDARDS IMPROVEMENT EXECUTIVES AND SAMPLE CHARTER, page H-64 to H-65

Responsibility: The DASD(PR) Standardization Program Division is the office of primary responsibility for initiating this action.

Task 2: Acquisition Review Process. The Standards Improvement Executives will advise the SAE in their Service/Agency acquisition review processes in support of the Program Managers and Program Executive Officers to ensure that military specifications and standards and performance-based specifications are properly addressed. As part of that review process, the Standards Improvement Executive shall be guided by the attached acquisition improvement principles for reviewing requests for proposal (see Attachment 2). The Standards Improvement Executives and the positions within the Military Departments' Standards Improvement Offices will be designated critical acquisition positions and shall be Level III certified in accordance with the Defense Acquisition Workforce Improvement Act.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: ACQUISITION IMPROVEMENT PRINCIPLES, page H-67

Responsibility: The Service/Agency Acquisition Executives will be responsible for assigning this task to the appropriate Service/Agency office.

DRAFT MEMORANDUM

MEMORANDUM FOR Service/Defense Logistics Agency Acquisition Executives

SUBJECT: Assignment of Service/Defense Logistics Agency (DLA) Standards Improvement Executives

1. In concert with recent DoD initiatives in acquisition reform, each of the three Military Services and DLA are to assign a Standards Improvement Executive. The Standards Improvement Executive shall execute the functions and tasks delineated in the attached charter. These Executives shall participate in the Service/Agency acquisition process to ensure that acquisition reform issues, as related to specifications and standards, are implemented across the Services and DLA. In concert with their participation in the acquisition process, these Service Executives positions shall be designated as critical acquisition positions and the Executives shall be Level III certified in accordance with the Defense Acquisition Workforce Improvement Act.

2. Your response is required no later than two months after the date of the directive. The senior official that has been assigned to chair the Defense Standardization Improvement Council is ___NAME___, ___OFFICE___. Your responses shall be directed to ___OSD SIE NAME___.

Signature Block

ATTACHMENT 1

Sample Charter for
Standards Improvement Executive

The Standards Improvement Executives shall:

a. Serve on the Defense Standards Improvement Council.

b. Establish a Service/Agency Standards Improvement Office to manage and direct the implementation of Defense Standards Program policies and procedures. The office will report at the Command Level.

c. Implement Defense Standards Program policies and procedures as defined in DoD 4120.3-M.

d. Serve as the Service/Agency focal point and advisor for implementation of acquisition initiatives related to specifications and standards.

e. Develop and implement, in conjunction with Deputy Assistant Secretary of Defense (Production Resources), a Service/Agency standards improvement plan which implements both the DoD standards goals and Service/Agency unique standards initiatives.

f. Act as waiver authority for the Defense Standards Program.

g. Participate in the Service acquisition process to ensure that standardization and performance-based requirements are properly addressed, and to implement the attached acquisition improvement principles.

h. Prepare annual reviews for the Deputy Secretary of Defense on the status of the Service/Agency Standards Improvement Program.

i. Develop, submit and defend a separate budget line item for Service/Agency Standardization.

As a member of the Defense Standards Improvement Council, the Standards Improvement Executive shall:

a. Assist in the development of DoD policies to improve acquisition through the use of standardization, nondevelopmental items, acquisition streamlining, and other related functions.

b. Identify the Service/Agency goals and resources necessary to accomplish those goals.

ENCLOSURE 1 TO ATTACHMENT 1

c. Influence Service/Agency resource commitment decisions to accomplish acquisition improvement functions and implement Defense Standards Improvement Council recommendations.

d. Participate in the establishment of *ad hoc* working groups, as required, to conduct studies or prepare recommendations to the Council for the solution of identified problems.

e. Represent the Service/Agency in the resolution of issues that cannot be resolved at a lower level.

f. Participate in the review of management and manufacturing standards to confirm that they have been converted to performance-based specifications.

ACQUISITION IMPROVEMENT PRINCIPLES

1. Use a concurrent engineering team approach for multi-functional integration throughout the life cycle.

2. Find opportunities to reduce cycle time in all acquisition processes.

3. Develop acquisition strategies which set priorities, identify streamlined paths to early fielding, and reduce barriers to commercial business practices.

4. Reduce functional requirements in every aspect of an acquisition. Eliminate all that add little or no value.

5. Base RFPs on product performance specifications. Remove barriers to dual-use technologies and modern manufacturing practices.

6. Apply best value source selection to both large and small procurements. Streamline the source selection process.

7. Integrate cost-effective testing throughout the life-cycle. Involve testers early in the process.

8. Promote quality through customer focus, process review, and continuous improvement.

9. Institutionalize these principles at all levels. Train continuously to operate as cross-functional teams.

10. Use electronic media infrastructure to reduce cost and improve quality.

ATTACHMENT 2

Commercial Practices

RECOMMENDATION: Use innovative approaches in the acquisition of weapon systems, components and replenishment items by using commercial practices.

IMPLEMENTATION:

Task: Develop plans to exchange innovative procedures on acquisition initiatives among the military Services and Defense Agencies.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: ACQUISITION OF WEAPON SYSTEMS, COMPONENTS, AND REPLENISHMENT ITEMS, page H-69

Responsibility: Acquisition Executives of the Services and Defense Agencies develop individual plans to share experiences. Assistant Secretary of Defense (Economic Security) will assure compliance and inform senior leadership.

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives/Defense Agencies and Direct Reporting Units

SUBJECT: Acquisition of Weapon Systems, Components, and Replenishment Items

1. The Department of Defense is committed to expanding the use of commercial business practices in acquisition as part of the overall impetus to change our culture.

2. Many successful practices mirroring the commercial sector are being used already within DoD. Examples are the concepts of the Prime Vendor Program, Shared Production, Customer Value Contracting, and Non-Developmental Item programs.

3. I direct that each Agency and Service develop a plan for sharing these innovative practices to include periodic updates on the successes and shortcomings experienced. Classical cases should be identified for use in the Road Shows and satellite communications training.

4 By sharing our successes and disappointments we can accelerate acquisition reform, gain public confidence, and improve our role as stewards of the resources entrusted to us.

5. Please submit your plans to this office within three months.

Signature Block

ATTACHMENT

Partnering

RECOMMENDATION: Increase the use of "partnering" in contracts and program management to improve relationships and communication between government and industry.

Task 1: Issue policy guidance encouraging partnering and prepare a DoD Handbook or Manual on partnering concepts and techniques (Additional information and discussion charts are available from Command Counsel, Headquarters, Army Materiel Command). The guidance would be substantially as follows:

> Partnering: The Department of Defense has a continuing effort to improve the relationships and communications between the DoD and industry. The establishment of partnering relationships and other alternative dispute resolution techniques with contractors can provide a significant benefit to this overall effort, as well as provide tangible benefits to individual contracts in terms of reduced cost and reduced delays and disruption.
>
> Pending issuance of a DoD manual, procuring activities and program managers are encouraged to establish partnering relationships in accordance with departmental guidance with contractors where the proposed contract is estimated at $1M or more. Partnering may be used in contracts of lesser value where appropriate.
>
> The following contract clause is provided as sample language to establish partnering within a contract. Actual contract language may require negotiation between the parties as individual contact circumstances dictate.
>
> Sample Partnering Clause
>
> > "In an effort to most effectively accomplish this contract, the Government proposes to participate in a concept called 'partnering' with the contractor. This cooperative effort would strive to draw on the strengths of each organization in an effort to achieve a quality project the first time, within budget and on schedule. This effort will be bilateral in make-up and participation will be totally voluntary. Any costs associated with effecting this partnering effort will be agreed to by the parties and will be shared equally with no change in contract price."

Responsibility: The Under Secretary of Defense (Acquisition & Technology).

Activity-Based Costing and Management

RECOMMENDATION: Continue to encourage and assist contractors to use activity-based costing in circumstances where the method could improve cost allocations, bidding, and cost-reimbursements.

Task 1: Policy. Request that the Cost Accounting Standards Board consider amending regulations to provide that adoption of activity-based costing on new contracts will not be considered a change in accounting systems on existing contracts. All contracts in existence at the time of initiation would continue using existing cost accounting methodology. If the request is approved by the Cost Accounting Standards Board, establish a DoD policy that encourages contractors to use activity-based costing on new contracts.

- Recommendation is that contractors be encouraged, not required, to use activity-based costing, so that the decision will rest with individual contractor firms in the private sector. DoD needs to do nothing with respect to individual contractors; the initiative has to come from them.

SEE ATTACHMENT, DRAFT MEMORANDUM SUBJECT: ACTIVITY-BASED COSTING (ABC) AND ACTIVITY-BASED MANAGEMENT, page H-72

Responsibility: The office of primary responsibility to initiate action is the Deputy Under Secretary of Defense (Acquisition Reform).

DRAFT MEMORANDUM

MEMORANDUM FOR Service Acquisition Executives/Defense Agencies
Director, Defense Logistics Agency

SUBJECT: Activity-Based Costing (ABC) and Activity-Based Management

Today's accounting systems, while adequate in determining overall costs, do not provide the necessary information to be used as a management tool. To provide management with the knowledge about what costs are and how to manage using cost data, a new field of accounting has emerged, i.e., Activity-Based Costing (ABC) and Activity Based Management. ABC captures and quantifies costs more accurately than broad-based overhead rates allowing management to make activity-based management decisions such as eliminating non-value-added cost drivers.

ABC is available to be used by DOD contractors as being fully compliant with DOD Cost Accounting Regulations. In order to identify and eliminate all non-essential costs in the manufacture of defense products, all DOD contractors should be encouraged to convert to ABC or to use it as a management tool.

It is important that all acquisition personnel involved in the cost accounting process be aware of the benefits of ABC and be trained in how to use it.

Signature Block

ATTACHMENT

Integrated Product Development (IPD)

RECOMMENDATION: IPD will be the preferred risk mitigation tool for all developmental acquisitions.

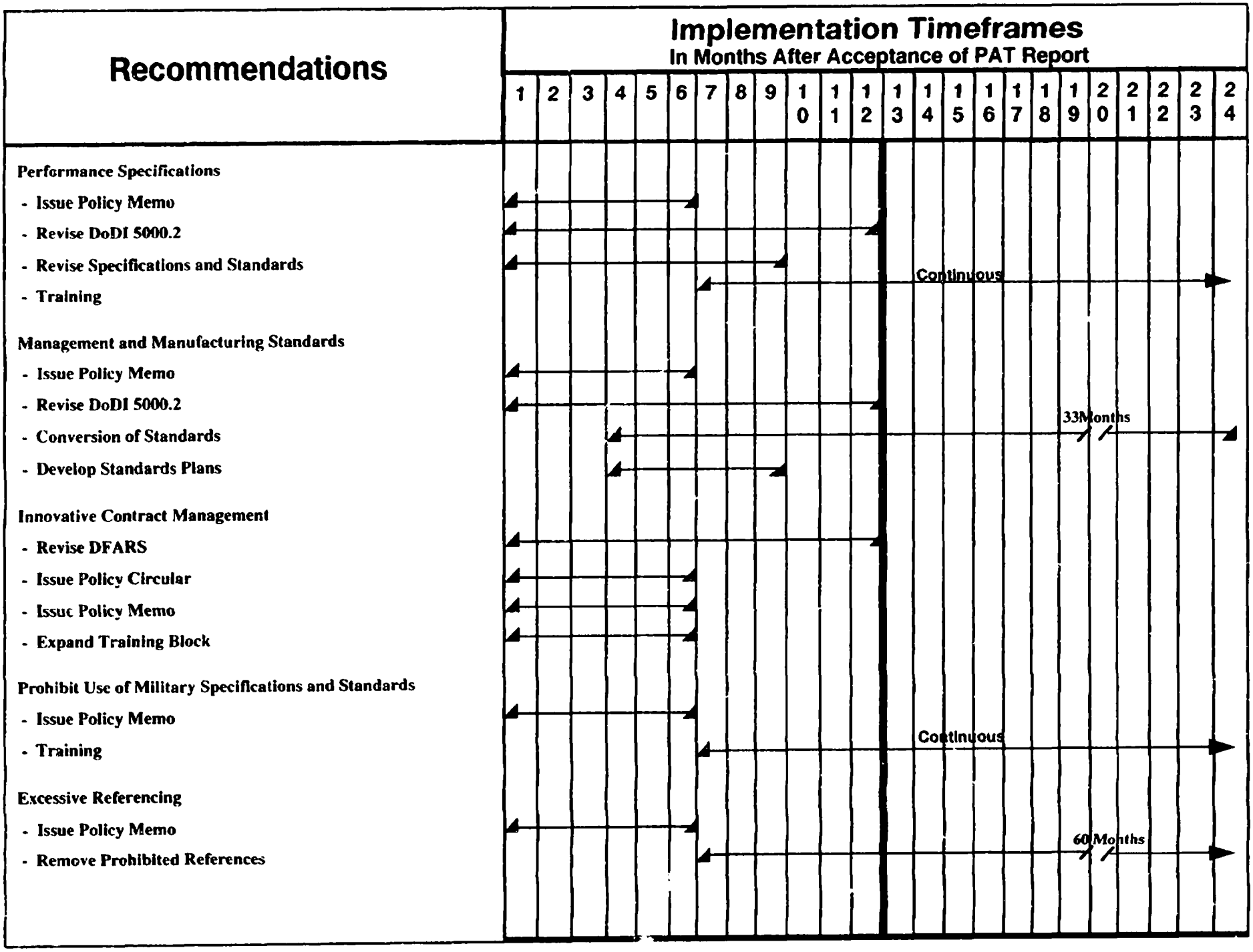
Task 1: Policy. Policy statement requiring the application of IPD in the program office. The following statement should be added to DODI 5000-2, Part 5, "Acquisition Strategy":

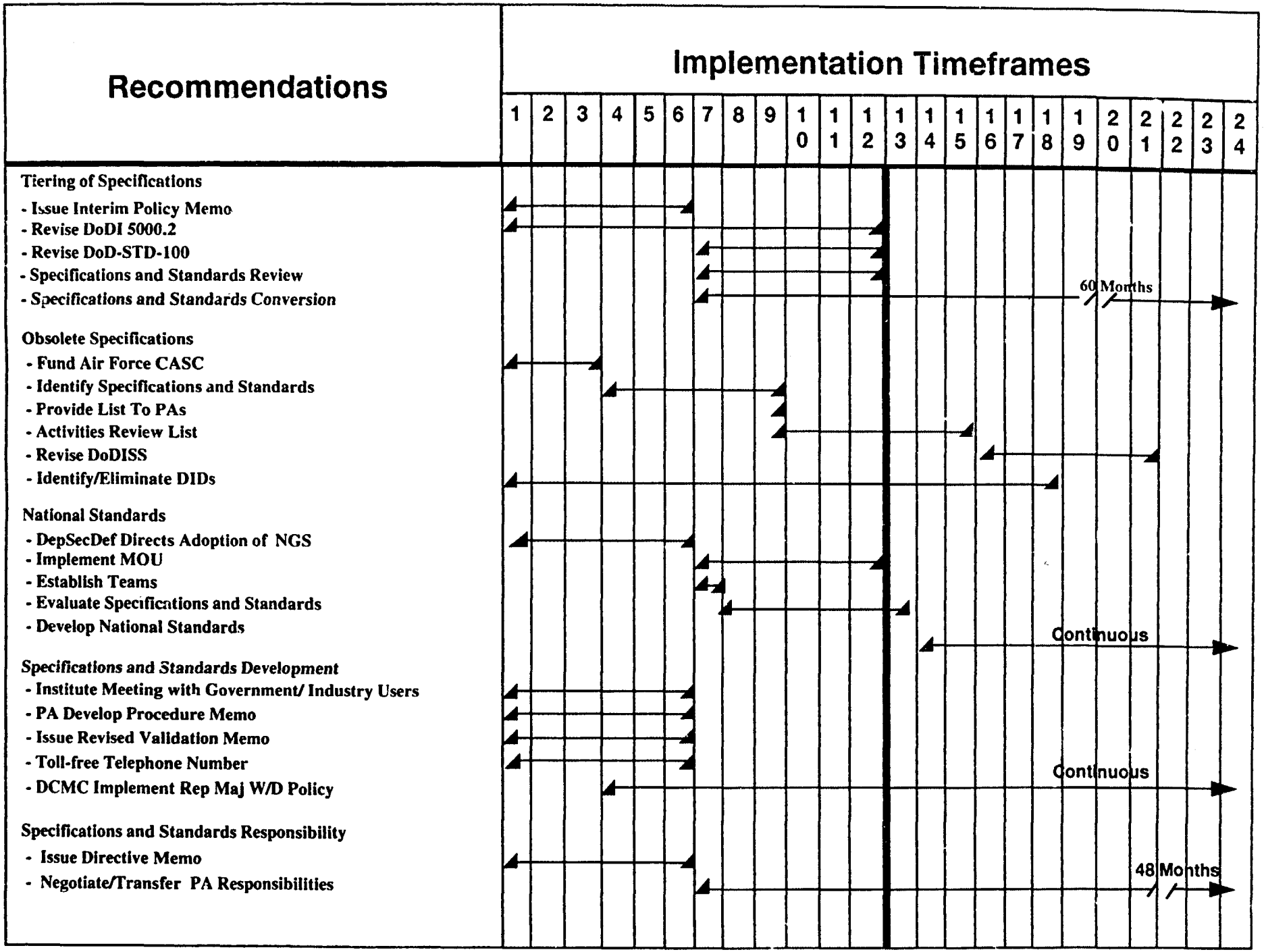
> "The Program management offices will use Integrated Product Development (IPD) as the recommended and preferred approach for new developmental acquisitions. IPD is an efficient management methodology that capitalizes on concurrent engineering principles, applying them to other program office functions. IPD employs a teaming of functional disciplines to integrate and concurrently apply necessary processes to produce an operationally required product that optimizes cost and schedule, increases product quality, promotes professional employee growth and performance, and enhances customer satisfaction."

Responsibility: Office of primary responsibility to prepare and staff this charge is the Deputy Assistant Secretary (Production Resources).

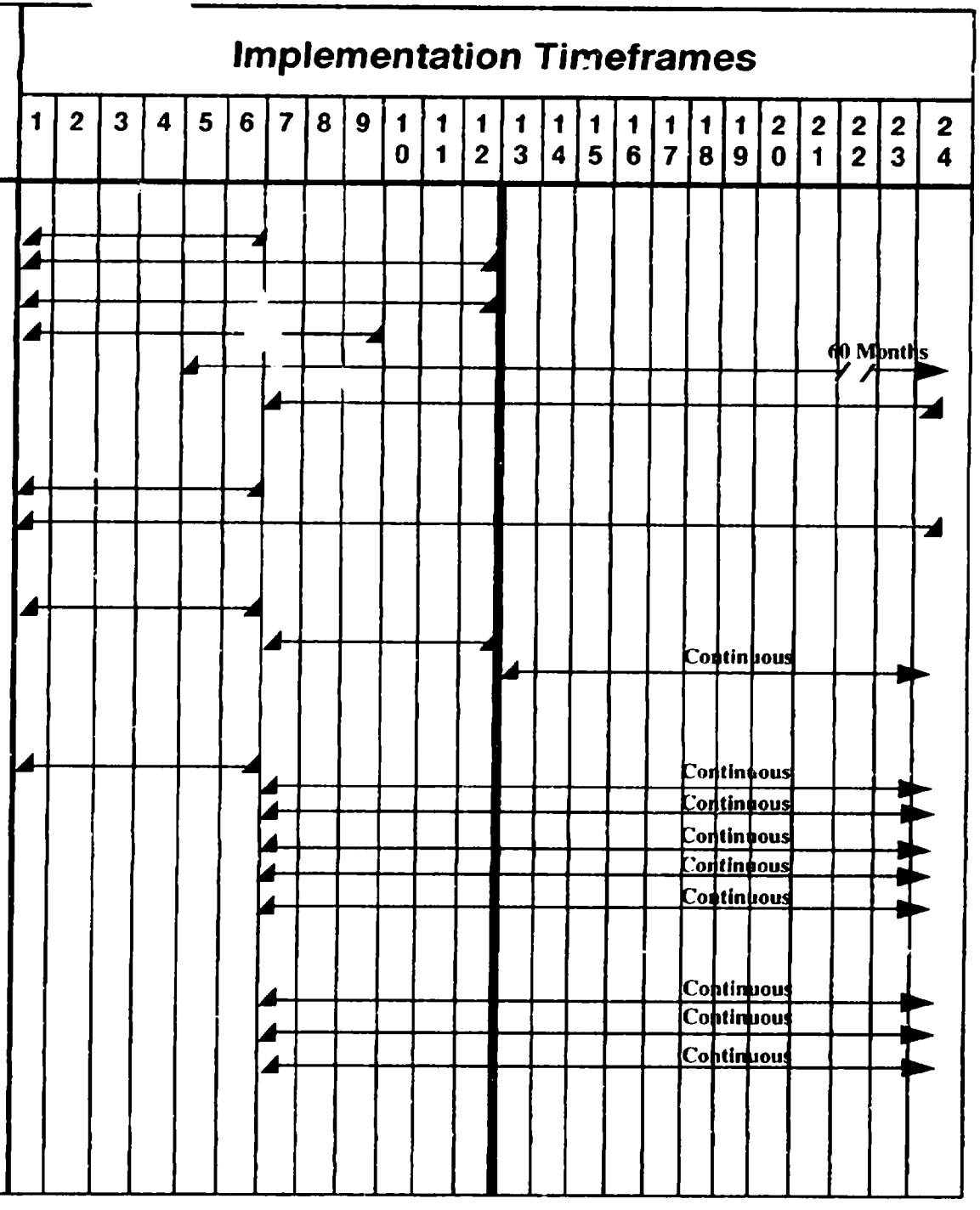
APPENDIX I

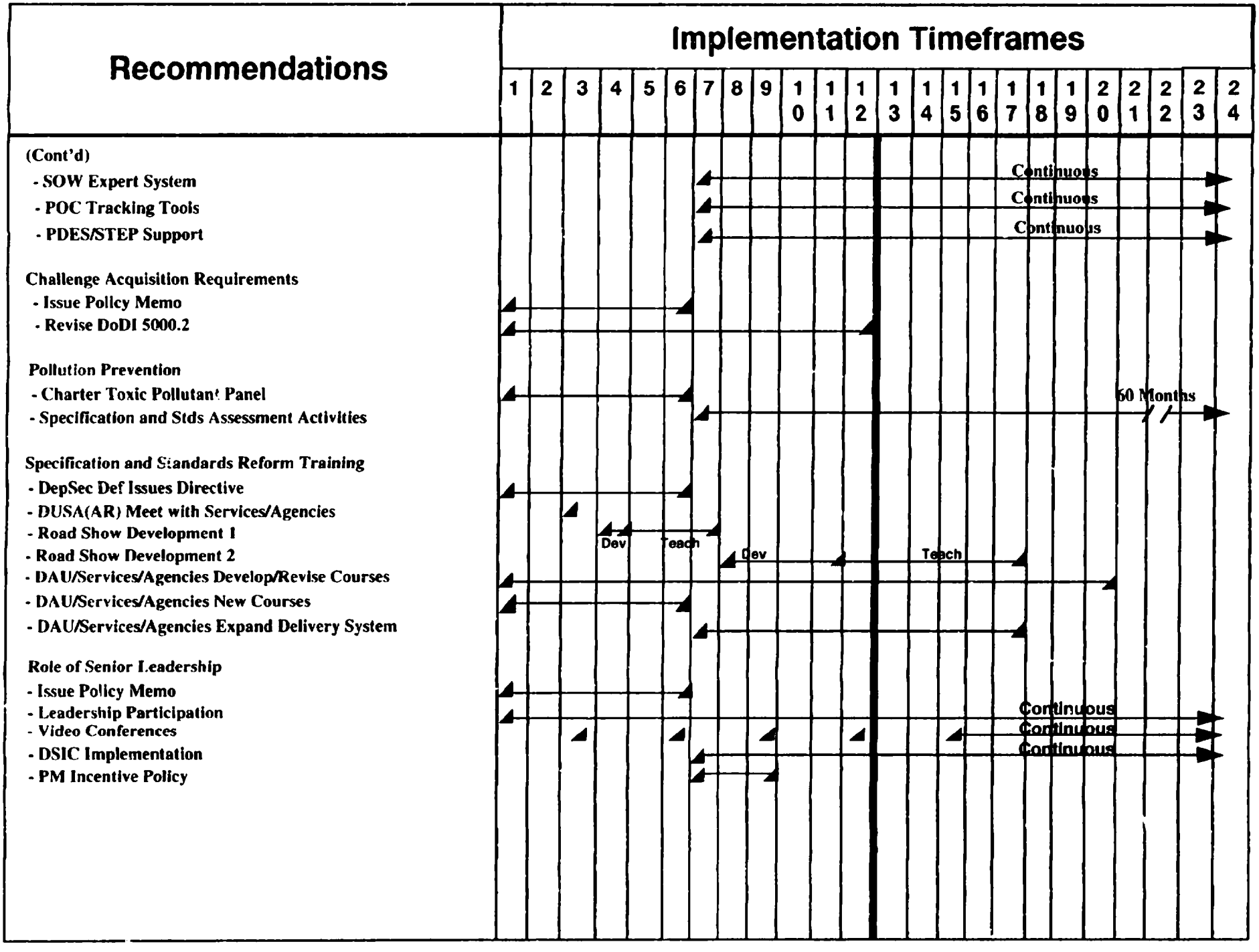
IMPLEMENTATION TIMEFRAMES

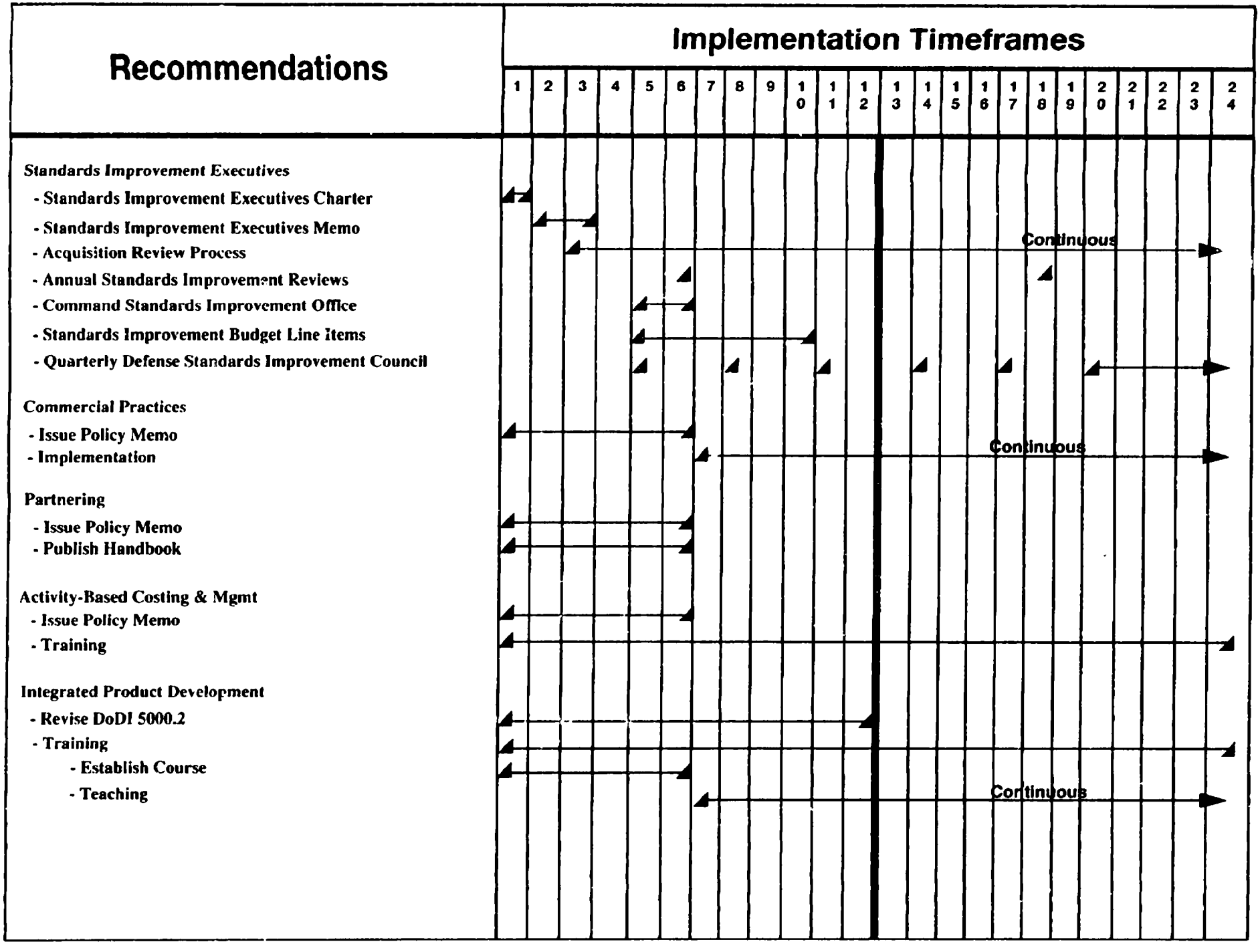

Recommendations
Implementation Timeframes
In Months After Acceptance of PAT Report
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Performance Specifications
- Issue Policy Memo
- Revise DoDI 5000.2
- Revise Specifications and Standards
- Training
Continuous
Management and Manufacturing Standards
- Issue Policy Memo
- Revise DoDI 5000.2
- Conversion of Standards
- Develop Standards Plans
33Months
Innovative Contract Management
- Revise DFARS
- Issue Policy Circular
- Issue Policy Memo
- Expand Training Block
Prohibit Use of Military Specifications and Standards
- Issue Policy Memo
- Training
Continuous
Excessive Referencing
- Issue Policy Memo
- Remove Prohibited References
60 Months


Recommendations
Implementation Timeframes
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Tiering of Specifications
- Issue Interim Policy Memo
- Revise DoDI 5000.2
- Revise DoD-STD-100
- Specifications and Standards Review
- Specifications and Standards Conversion
60 Months
Obsolete Specifications
- Fund Air Force CASC
- Identify Specifications and Standards
- Provide List To PAs
- Activities Review List
- Revise DoDISS
- Identify/Eliminate DIDs
National Standards
- DepSecDef Directs Adoption of NGS
- Implement MOU
- Establish Teams
- Evaluate Specifications and Standards
- Develop National Standards
Continuous
Specifications and Standards Development
- Institute Meeting with Government/ Industry Users
- PA Develop Procedure Memo
- Issue Revised Validation Memo
- Toll-free Telephone Number
- DCMC Implement Rep Maj W/D Policy
Continuous
Specifications and Standards Responsibility
- Issue Directive Memo
- Negotiate/Transfer PA Responsibilities
48 Months

Recommendations




Recommendations
Implementation Timeframes
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
(Cont'd)
- SOW Expert System
- POC Tracking Tools
- PDES/STEP Support
Continuous
Continuous
Continuous
Challenge Acquisition Requirements
- Issue Policy Memo
- Revise DoDI 5000.2
Pollution Prevention
- Charter Toxic Pollutant Panel
- Specification and Stds Assessment Activities
60 Months
Specification and Standards Reform Training
- DepSec Def Issues Directive
- DUSA(AR) Meet with Services/Agencies
- Road Show Development 1
- Road Show Development 2
- DAU/Services/Agencies Develop/Revise Courses
- DAU/Services/Agencies New Courses
- DAU/Services/Agencies Expand Delivery System
Dev
Teach
Dev
Teach
Role of Senior Leadership
- Issue Policy Memo
- Leadership Participation
- Video Conferences
- DSIC Implementation
- PM Incentive Policy
Continuous
Continuous
Continuous


Recommendations
Implementation Timeframes
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Standards Improvement Executives
- Standards Improvement Executives Charter
- Standards Improvement Executives Memo
- Acquisition Review Process
- Annual Standards Improvement Reviews
- Command Standards Improvement Office
- Standards Improvement Budget Line Items
- Quarterly Defense Standards Improvement Council
Continuous
Commercial Practices
- Issue Policy Memo
- Implementation
Continuous
Partnering
- Issue Policy Memo
- Publish Handbook
Activity-Based Costing & Mgmt
- Issue Policy Memo
- Training
Integrated Product Development
- Revise DoDI 5000.2
- Training
- Establish Course
- Teaching
Continuous